

City and County of San Francisco  
Department of City Planning

Final Environmental Impact Report  
**71 Stevenson Street**

81.493E

State Clearing House Number 82101915

Publication Date: October 15, 1982

Public Comment Period: October 15, 1982 through  
November 18, 1982

Public Hearing Date: November 18, 1982

Certification Hearing Date: June 16, 1983

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I. SUMMARY

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PROJECT DESCRIPTION

The project sponsor, Highfield Stevenson Partnership, proposes to construct a 23-story office building in the middle of the block bounded by Market, First, Mission and Second Sts. The project would front on Stevenson and Jessie Sts., two streets located in the interior of the block, and would be between Ecker and Anthony Sts., neither of which is continuous from Market St. to Mission St. The main entrance to the building would be from Stevenson St.; an additional entrance would be located on Jessie St. The project would contain about 365,200 gross sq. ft. of floor area including rooftop mechanical and basement parking areas. Floors two through 22 would contain 324,640 gross sq. ft. of office area. The ground floor would contain about 1,640 gross sq. ft. of retail area, and about 5,700 sq. ft. in elevator and lobby uses. The remainder of the ground floor would be used for loading space and a ramp to the subsurface parking garage. The building footprint of about 16,000 sq. ft. would cover 63% of the 24,710-sq.-ft. site; the remainder of the site would be a paved plaza encircling most of the building. The 23rd floor would contain mechanical equipment.

The project would contain three loading docks accessible from Jessie St., each with minimum dimensions of 35 ft. (deep) by 12 ft. (wide). Parking for 34 cars would be provided in a subsurface parking garage. Entrance to the parking garage would be from Stevenson St. to a ramp located northeast of the building's main pedestrian entrance.

The building would have the appearance of two towers offset from each other, and opposite corners of the building (west and east) would be rounded. The building's surface would be metal and glass panels, with non-reflective tinted glass on upper floors and clear glass at ground level. Facade colors have not been determined but would be light and medium in tone.

## PROJECT EFFECTS

### URBAN DESIGN, LAND USE AND VISUAL

The project would require demolition of two C-rated structures on the site, the 71 Stevenson St. Garage and the Hertzka Warehouse at 64 Jessie St. The project would comply with the basic use, height and bulk provisions of the City Planning Code and with the current moratorium on use of floor area bonuses for office buildings.

The project would not be visible in the City skyline. From most vantage points, it would not be visible because of taller, intervening structures. It would be visible from the south against a backdrop of taller buildings. The project would not obstruct any scenic views now available to the public; it would block some views to the south from neighboring buildings.

### SHADOWS

The project would cast new shadows across the Chevron Garden Plaza in winter during morning hours (beginning sometime before 10:00 a.m.). By 11:00 a.m., the project's winter shadows would shade only a portion of this plaza; by noon, the project would not shade the Garden Plaza. A narrow shadow would fall on the Tishman Plaza at noon and would broaden by 1:00 p.m.; the later shadow would be limited to the elevated portion of the Tishman Plaza. By 2:00 p.m., only a small portion of this elevated area would be shaded.

In spring, the project would completely shade the Garden Plaza from 10:00 a.m. to 11:00 a.m.; by 12:00-1:00 p.m., only a small portion of the Plaza would still receive project shadows. A narrow shadow from the project would fall on the Tishman Plaza at noon, while at 1:00 p.m. the shadow would be broader, but would be limited to the elevated portion of the Tishman Plaza. By 2:00 p.m., only a small portion of this elevated area would be shaded.

At 10:00 a.m. in the summer, project shadows would fall on a portion of the Chevron Garden Plaza. At 11:00 a.m., a larger portion of the plaza would be shaded. At noon, the project would cast a shortened shadow on the southerly

half of the Garden Plaza. After 12:00 p.m., the project would not shade either of the plazas in summer. The project would intercept the path of the sun at points northwest of the project site during morning hours.

### EMPLOYMENT, HOUSING AND FISCAL

Revenues to the General Fund from the project would total \$1.1 million annually in property and other taxes, 18 times the revenues generated by existing site uses. The estimated project-generated annual subsidy requirement of Muni would be \$70,100.

The project would result in the demolition of a parking garage with 300 spaces and a warehouse of 20,770 gross sq. ft., displacing five employees. About 1,325 persons would be employed in the project, a net increase in employment of 1,320 jobs. Estimated housing demand attributable to the project would be 289 units.

### TRANSPORTATION

The project would generate directly about 940 person trips in the p.m. peak hour, 250 of which would be on Muni and 310 of which would be by auto. The remainder would be primarily on other public transit systems. By the year of project completion (1985), additional parking facilities would be essentially unavailable to absorb the demand in the project area. Consequently, some of the project drivers parking in the City would displace other parkers, resulting in a greater total increase in p.m. peak-hour transit ridership and ridesharing. The project would result in about 700 pedestrian person trips during the p.m. peak hour, about 200 on Jessie St. and about 500 on Stevenson St. At the midday peak hour, the project would increase pedestrian traffic on Stevenson St. by about 400 pedestrians, an increase of 50%; the increase could be accommodated on that street. Cumulative downtown development, including the project, would put crosswalks at Mission and First Sts. at 100% of capacity at the p.m. peak hour. Project-related pedestrian traffic plus pedestrian traffic generated from the Ecker Square Building, presently under construction at the corner of Ecker and Jessie Sts., would account for a 15% increase at these crosswalks, constituting roughly 5% to 10% of total projected p.m. peak-hour pedestrian traffic in 1985.



## ENERGY, OPERATIONAL AIR QUALITY AND CONSTRUCTION NOISE

Annual electrical energy consumption at the project would be 7.6 million kilowatt hours; annual natural gas consumption would be 5.7 million cubic ft. Total annual energy consumption would be 84 billion Btu, a net increase of 83 billion Btu over existing energy consumption at the site. Air quality effects of the project would be primarily transportation-related. The project would not result in any violation of standards. Increases in traffic from cumulative downtown development could impede attainment of standards for some pollutants.

Construction activities would temporarily increase noise and vibration levels in the area of the site; noise would reach 65-70 dBA in nearby buildings. Piledriving, which would last about 4 weeks, would produce noise levels of 100 dBA at 100 ft. from the site (80-85 dBA in adjacent buildings and those directly across Stevenson and Jessie Sts. from the site) and would also cause the greatest amount of vibration. If it occurred, concurrent construction of other proposed projects in the immediate vicinity of the site would compound construction noise and vibration effects. Night work would reduce effects on most uses in the area; however, Golden Gate University, across Jessie St. east of the site, is open at night and on weekends, as well as during the day. Construction activities could adversely effect users of the University primarily during the period of piledriving.

## MAJOR MITIGATION MEASURES

Mitigation measures proposed as part of the project include:

### Urban Design

- The project would be set in from property lines at all sides and would have rounded corners on the northwest and southeast. The effect would be to minimize shadows and allow the creation of a ground floor plaza and pedestrian passage between Stevenson and Jessie Sts.

Housing

- The project sponsor would provide 289 housing units or the equivalent under the Office Housing Production guidelines.

Transportation

- The sponsor would contribute to Muni under Ordinance 224-81, if upheld, or any other lawful measures passed by the Board of Supervisors to mitigate the effect of incremental demand on Muni services from the project upon completion.
- A transportation broker would be designated to develop and implement a transportation management program.

Construction Noise

- Holes for piles would be pre-augered, if possible, to reduce noise impacts.

ALTERNATIVES TO THE PROPOSED PROJECT

The following alternatives to the proposed project are discussed in Section VII. of this report:

- A. No project.
- B. The project as proposed, but with no on-site parking.
- C. Provision of an office project conforming to regulations proposed in Guiding Downtown Development.
- D. Provision of a mixed office/housing project conforming to regulations proposed in Guiding Downtown Development.

## II. PROJECT DESCRIPTION

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### SPONSOR'S OBJECTIVES

Highfield Stevenson Partnership, a subsidiary of Highfield Corporation, Ltd., a Canadian corporation based in Vancouver, British Columbia, proposes to construct a 23-story office building in downtown San Francisco, near the Transbay Transit Terminal. The project is intended to provide an office tower of the highest quality design in response to current demand for new office space in the Financial District, and particularly in the South of Market area. Project architects are Gensler and Associates of San Francisco, California.

### PROJECT LOCATION

- The project site is located in the interior of Assessor's Block 3708, bounded by Market, First, Mission and Second Sts. (see Figures 1 and 2, pp. 7 and 8). The 24,710-sq.-ft. project site consists of Lot 28, which fronts on Stevenson and Jessie Sts. (two of the several small streets which cut through the block), and Lot 29, which fronts on Jessie St. The site is between Anthony and Ecker Sts., neither of which is continuous from Market St. to Mission St. The site is in the C-3-0 Downtown Office District and the 700-I Height and Bulk District, as classified by the City Planning Code.

Two buildings are on the site: a parking garage at 71 Stevenson St. and the Hertzka Warehouse at 64 Jessie St. The identities of major buildings in the vicinity of the site are shown in Figure 2, p. 8.

- The site is less than one block from the Transbay Transit Terminal, which serves commuter buses from the East Bay, North Bay and Peninsula and interregional buses of Continental Trailways Systems. The site is half a block away (about 450 ft.) from Market St., which functions as a major public







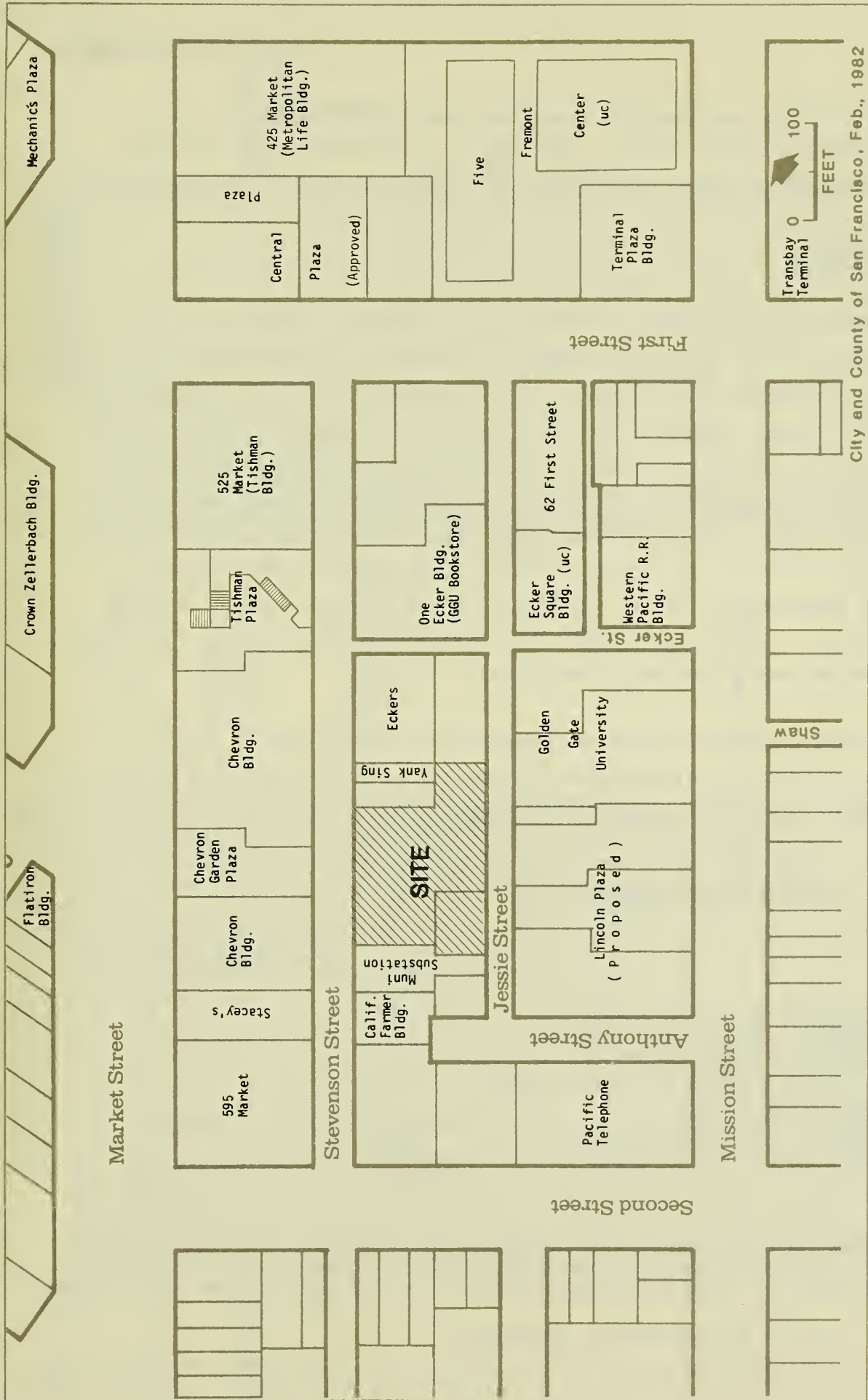


FIGURE 2: Project Site and Vicinity

SOURCE: Environmental Science Associates, Inc.

## II. Project Description

transit corridor, and less than one block from the Montgomery St. BART/Muni-Metro Subway Station. The site is located about 400 ft. from Mission St., about 700 ft. from First St., and about 300 ft. from Second St.

### PROJECT DESIGN

The project would consist of an off-set tower scheme in which the building massing would be arranged in two unequal portions; the larger portion would rise the equivalent of two floors above the smaller portion to accommodate the mechanical space. Two opposite corners of the building would be rounded (the northwest and southeast corners) to minimize view obstruction from nearby buildings and shadowing of nearby plazas (see Figures 3 and 4, pp. 10 and 11). The 23-story office building would rise to a maximum height of 324 ft. above street level. The structure would be set back from the lot lines, covering approximately 63% of the site with a building footprint of about 16,000 sq. ft. The project would contain about 365,200 gross sq. ft. Table 1 lists the project's proposed floor areas.

The building entrance would be on Stevenson St. (see Figure 5, p. 12); it would be defined by polished stone columns set on each side of the entry, with a polished stone lintel topping the columns.

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TABLE 1: PROPOSED FLOOR AREAS (in sq. ft.)

---

	<u>Actual Gross Area</u>	<u>FAR Gross Area*</u>
Basement (parking and mechanical)	20,456	-
Ground Floor (1,635 sq. ft. retail; 5,688 sq. ft. lobby, elevators 3,554 sq. ft. loading and parking ramp)	10,877	7,323
2nd through 22nd Floors (15,459 sq. ft. each)	324,639	324,639
23rd Floor (Mechanical Penthouse)	<u>4,648</u>	<u>-</u>
TOTAL	360,620	331,962

\*FAR means Floor Area Ratio. It is the ratio of the gross sq. ft. of floor area, as defined by Planning Code Section 102.8, to the sq. ft. of the site area. Mechanical space and accessory parking are exempt from FAR calculations.

SOURCE: Gensler and Associates, Architects.

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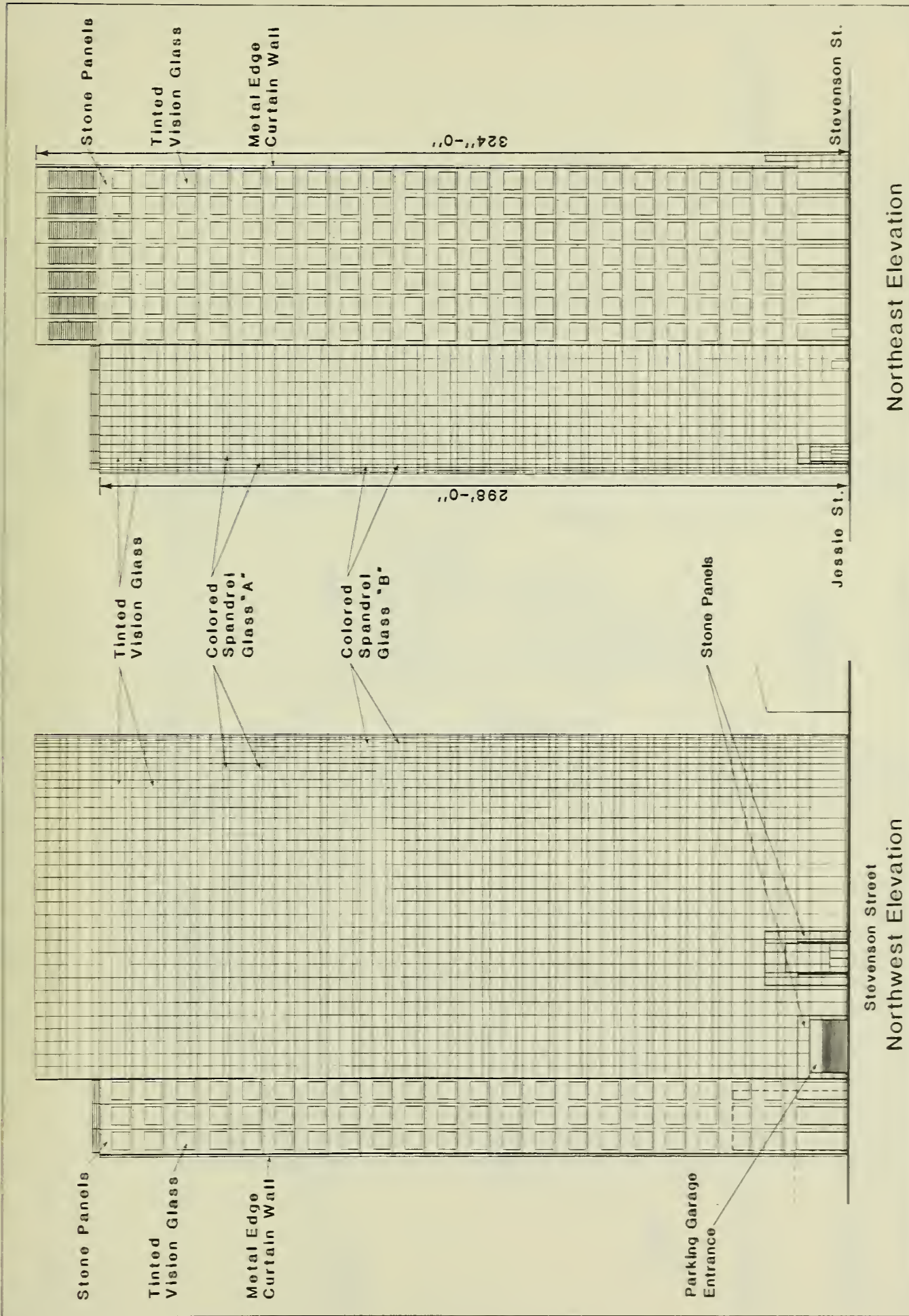


FIGURE 3: Elevations of the Project

SOURCE: Genslor & Associates, Architects

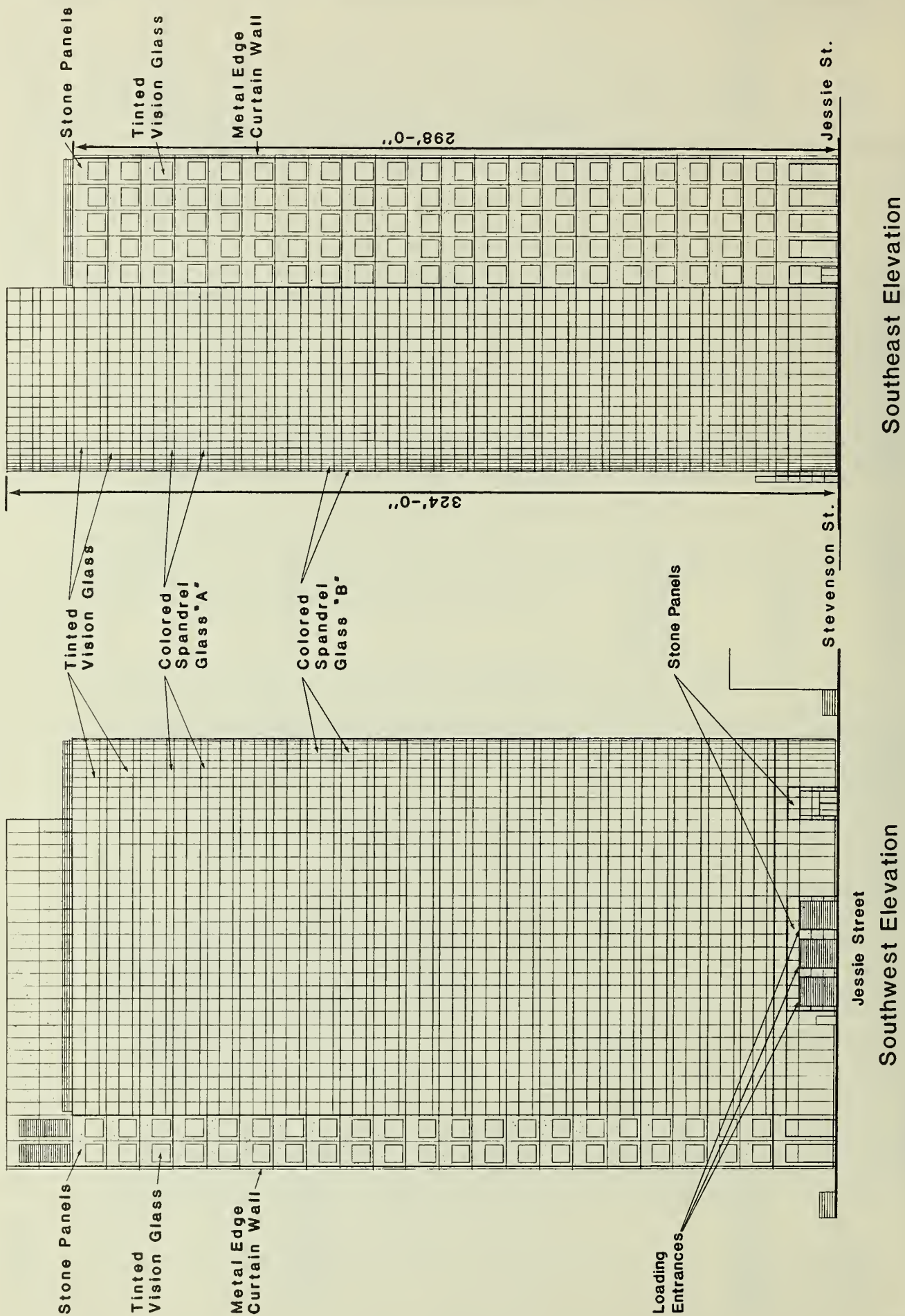
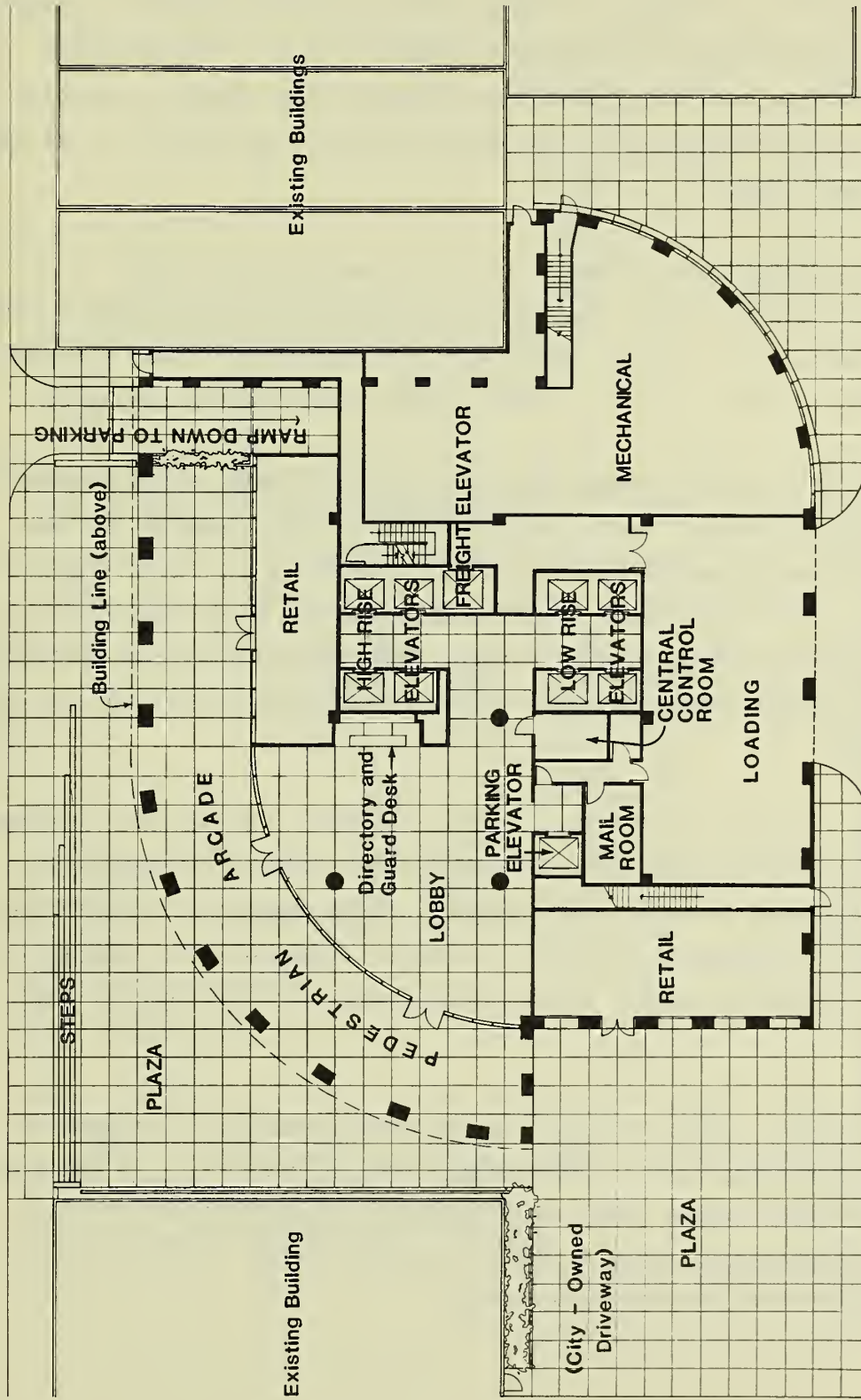


FIGURE 4: Elevations of the Project

SOURCE: Gensler & Associates, Architects



Stevenson Street



Jessie Street



SOURCE: Gensler & Associates, Architects

FIGURE 5: Ground Floor Plan

## II. Project Description

A second entrance would be located at the south corner of the building off the plaza on the Jessie St. frontage. Loading dock facilities would be located on Jessie St.; three truck stalls, each 35 ft. deep by 12 ft. wide (minimum dimensions), would be provided. Vehicular access to the project's parking garage would be on Stevenson St.; a two-way ramp would lead down to a 34-space parking level (see Figure 6, p. 14).

The ground floor would contain retail space and the building lobby. A pedestrian arcade would connect the Jessie St. entrance with the main building entrance on Stevenson St. Office space would be located on floors two through 22 (see Figure 7, p. 15). The 23rd floor would contain mechanical space.

The building exterior would consist of a glass curtain wall and painted metal panels (see Figures 3 and 4, pp. 10 and 11). The coloring of the building has not been determined except that it would be of shades medium to light in value. The curtain wall would contain colored glass spandrels of alternating light and medium tones. Tinted, non-reflective vision glass would be used in all windows above the first floor. Clear glass would be used at the ground level.

Plazas would be located on three sides of the building (on the east and west sides of the building on Jessie St. and on the west side on Stevenson St.) They would be surfaced in decorative pavement with a pattern. Street trees would be planted at intervals of 20 ft. along the Stevenson St. frontage (as required by the planning code). Artwork is being considered for the plaza space.

- The sponsor proposes, subject to approval by City agencies, to include the Muni Substation driveway east of the project site on Jessie St. in the paving to be applied to the project plaza and Jessie St. as part of the project. No structures or landscaping would be placed on the driveway. The City would maintain ownership and use of the driveway.

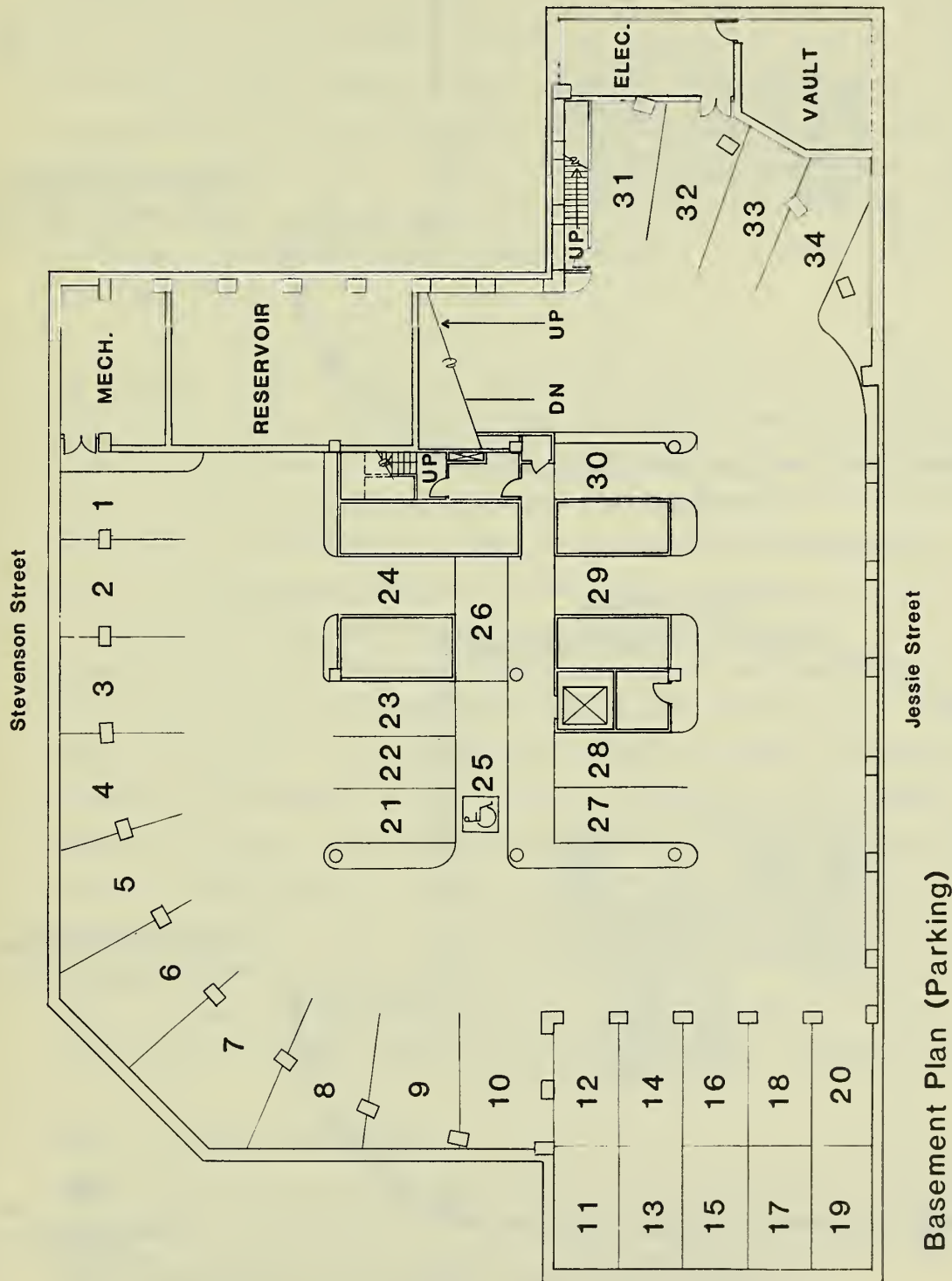
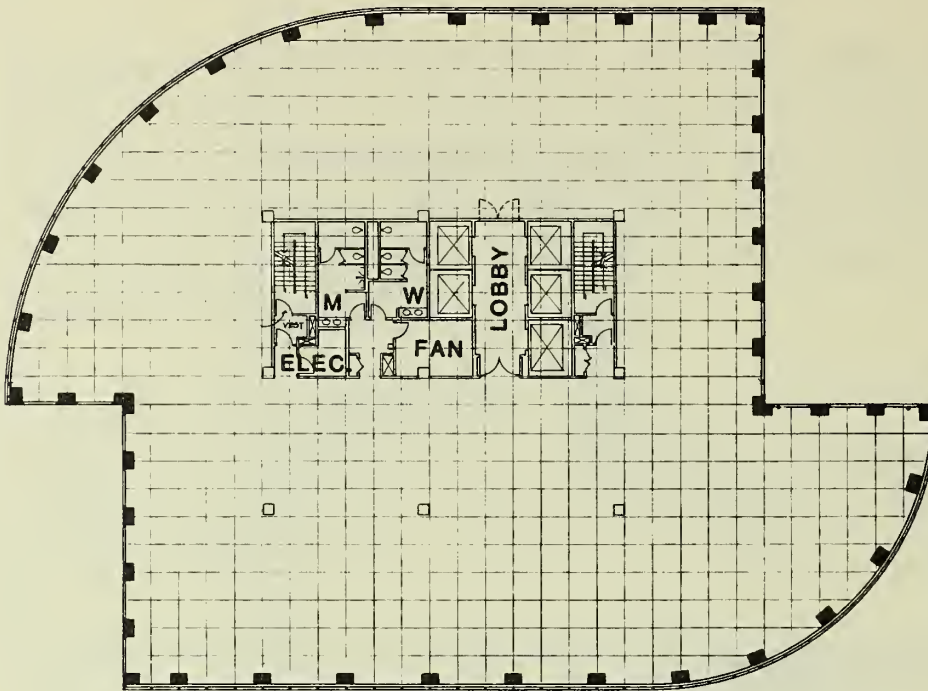


FIGURE 6: Basement Plan

SOURCE: Gensler & Associates, Architects



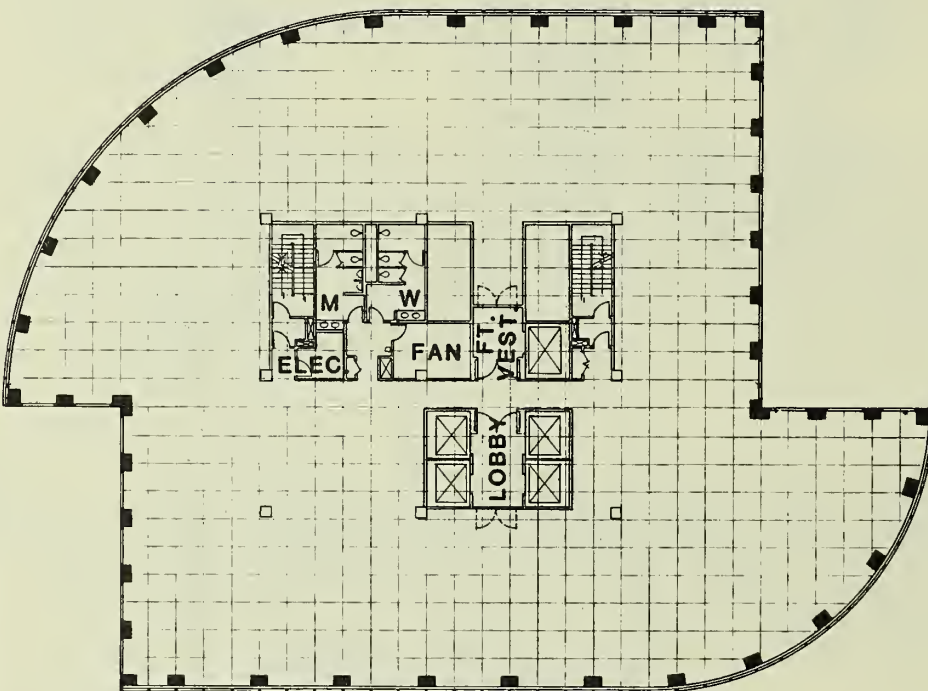
Stevenson Street



Typical High-Rise  
Floor Plan (13-22)

Jessie Street

Stevenson Street



Typical Low-Rise  
Floor Plan (3-12)

Jessie Street



FIGURE 7: Typical Low-Rise and  
High-Rise Floor Plans

SOURCE: Gensler and Associates, Architects

### PROJECT SCHEDULE, COST AND REQUIRED ACTIONS

Environmental review and project design are scheduled by the project sponsor to be completed by late 1983. Following approval of permits, site clearance and excavation would require about 14 weeks, foundations about 8 weeks, structural steel and cladding about 34 weeks, and finishing about 44 weeks. Several of these periods overlap, and the entire construction period would be about 1.5 years. Initial occupancy is projected for early 1985 with full occupancy in mid-1985. Construction costs are estimated at \$29.5 million (1982 dollars).

The project complies with use, height and bulk provisions of the Interim Controls/1/ of the City Planning Code currently in effect, and thus would require no variances or conditional use permits. The City Planning Commission will review and certify the Environmental Impact Report if determined complete and accurate. On January 17, 1980, the City Planning Commission established a policy of Discretionary Review of development proposals for new construction or alterations which would result in increased floor area in the Interim Downtown Special Use District during the interim moratorium on the use of floor area bonuses./2/ Under this policy, the Commission will review the project design and its environmental context in detail, and adopt a resolution approving, approving with conditions, or disapproving the project. Mitigation measures included in the EIR can be used as conditions for approval of the project. Should approval be granted by the City Planning Commission, or by the Board of Permit Appeals on appeal, the project sponsor would obtain a demolition permit from the Central Permit Bureau of the Department of Public Works, followed by a building permit or permits administratively approved for compliance with fire, electrical, building and other pertinent City codes.

#### NOTES - Project Description

/1/ San Francisco Board of Supervisors, City Ordinance No. 240-80 amending section 126 of the Planning Code, adopted July 1, 1980, with Board action to continue current interim controls to March 1982 (Board file 123-81-2). This ordinance prohibits development bonuses for office use.

/2/ San Francisco City Planning Commission, Resolution No. 8474, adopted January 17, 1980, and extended by Resolution No. 8982, adopted June 4, 1981.

### III. ENVIRONMENTAL SETTING

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Land use and zoning considerations, while not considered to be areas of potential impact of the project, are included in the setting section of the report to provide information on the location and surroundings of the project site.

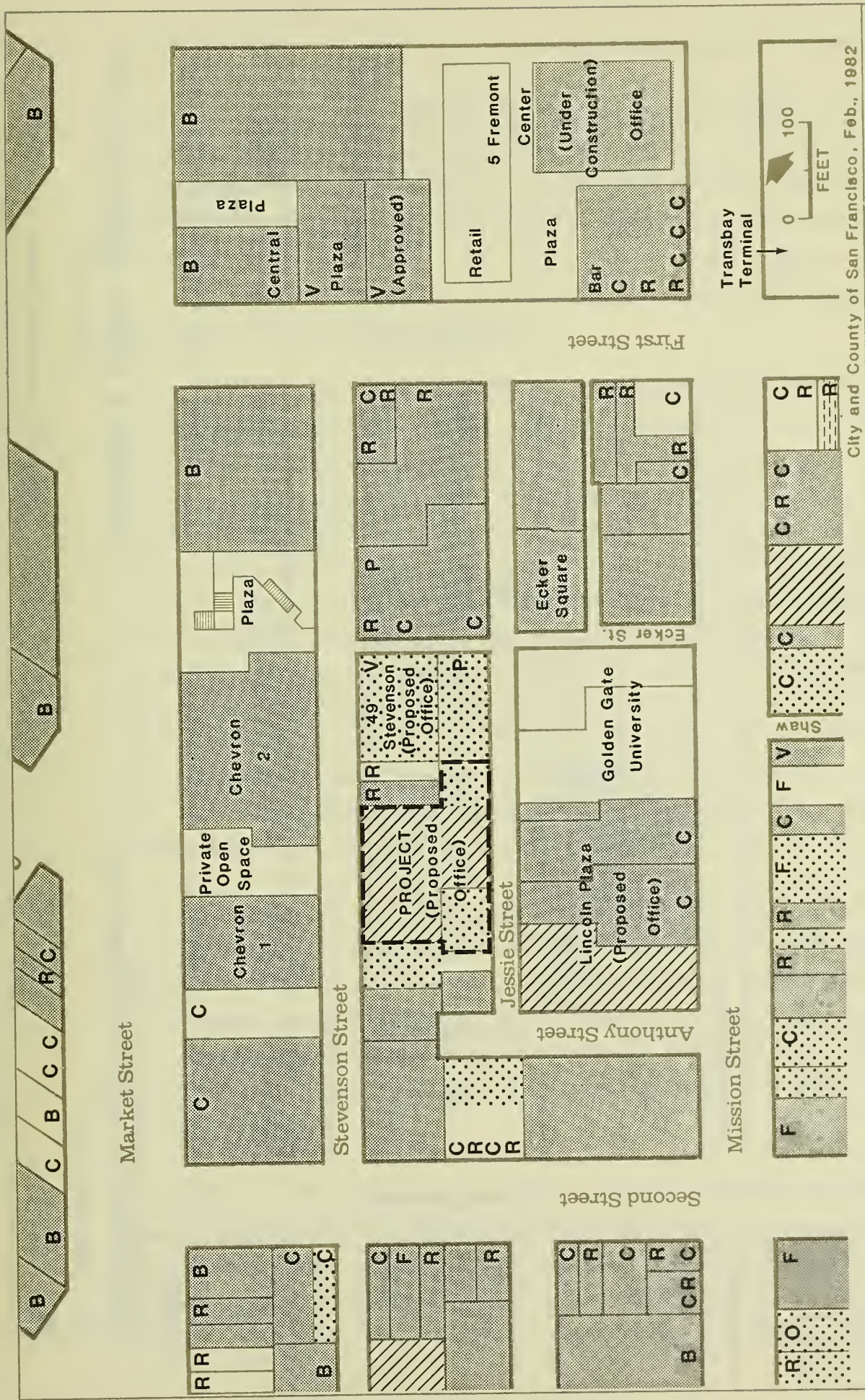
#### A. LAND USE AND ZONING

##### LAND USE

The project site contains about 24,710 sq. ft. Existing buildings on the site include a five-story warehouse at 64 Jessie St. and a two-story parking garage at 71 Stevenson St. The warehouse contains about 20,770 sq. ft. and is currently vacant. The parking garage contains approximately 61,700 sq. ft. and about 300 parking spaces. Both site buildings are built to lot lines.

Predominant land uses in the project vicinity consist of office, retail and various service and educational uses (see Figure 7a, p. 17a). Newer high-rise office development is located northerly of the site across Stevenson St. It includes the 35-story 595 Market St. Building, the 39- and 22-story Standard Oil Buildings (575-573 Market St.) and the 38-story Tishman Building (525 Market St.). In addition, several high-rise office buildings are currently under construction or approved near the project site: the 40-story One Sansome St. (Citicorp) building at Sansome and Bush Sts., the 43-story Five Fremont Center at Mission and Fremont Sts., and the 18-story Ecker Square Building at Jessie and Ecker Sts., the 8- and 23-story buildings of the Central Plaza project at the southeast corner of Market and First Sts., and the 90 New Montgomery proposal at New Montgomery and Mission Sts. A 30-story building, Lincoln Plaza (formerly known as One Anthony Court), is proposed south of the project site at the corner of Anthony Place and Mission St. Building heights on and near the project site are shown in Figure 8, p. 18.





NOTE: Letters indicate use on ground floor only. Patterns indicate use on ground floor or upper levels.

- LEGEND**
- Office
  - Warehouse, Light Industry
  - Parking Garage/Lot
  - Residential
  - Bank
  - Printer
  - Restaurant
  - Furniture Store
  - Vacant
  - Office

● FIGURE 7A: Land Use Map

SOURCE: Environmental Science Associates, Inc.





# LEGEND

Numbers indicate Building Heights in Stories  
 Numbers in Parentheses indicate Proposed Building Heights

UC Under Construction

Project Site

● **FIGURE 8: Building Heights Near the Project Site**

SOURCE: Environmental Science Associates, Inc.

### III. Environmental Setting

Office above ground-floor retail activities, printers and other business support services, and Golden Gate University and its related activities are the primary uses occurring southerly of the project site. These uses are generally housed in older buildings ranging from two to eight stories in height.

#### Cumulative Office Development Downtown

Existing office space in San Francisco totals about 60.6 million gross sq. ft. (see Appendix A, Table A-1, p. 397). About 7.8 million gross sq. ft. of office space is currently under construction. About 5.4 million gross sq. ft. has been formally approved but is not yet under construction, and an additional 4.2 million gross sq. ft. of office space is under formal review. Together these total 17.4 million gross sq. ft. of new office space. About 1.3 million gross sq. ft. of existing office space has been or is proposed to be demolished to clear the sites for these office developments. This results in a net addition of 16.1 million gross sq. ft. of new office space in Downtown San Francisco. For analysis purposes, the 16.1 million gross sq. ft. of net new space is used, for it refers to the amount of new construction in excess of existing space on each site in terms of gross sq. ft. of floor space. If these projects were all completed, San Francisco would have a total of approximately 77 million sq. ft. of office space.

The above numbers and the cumulative analyses in this report are based on a list of office buildings, prepared by the Department of City Planning, which on August 6, 1982 were in one of three categories: 1) under formal review by the Department of City Planning; 2) approved but not yet under construction; and 3) under construction. These buildings and the total sq. ft. of office and retail space in each category are listed in Appendix A, Tables A-2 and A-3, pp. 399-403.

The cumulative list contains only those buildings which are, or have been, formally under review by the Department of City Planning and the Department of Public Works, or for which plans are well defined. Not included are projects which are in an early planning stage but for which details as to types of use and floor areas of office and retail space are not available. Thus excluded

### III. Environmental Setting

are buildings in the Yerba Buena Center Redevelopment Area, Mission Bay of the Southern Pacific Land Company, the Rincon Hill-South Beach Redevelopment Area, and unfunded State and Federal office building proposals. The cumulative list does contain those office buildings in the Yerba Buena Center Redevelopment Area which are under construction or for which Land Disposition Agreements have been approved, and which have definitely identified floor area figures. The San Francisco Redevelopment Agency is currently considering a range of additional amounts of office space, but the nature and scale, including floor area, are tentative and uncertain. Therefore, potential office space in Yerba Buena Center is not included. The general basis for future development will be in accordance with the Yerba Buena Center Redevelopment Plan as amended. Hotel projects have not been included in the cumulative analyses because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit. The reason for this methodology is more fully explained in Appendix D, p. 413.

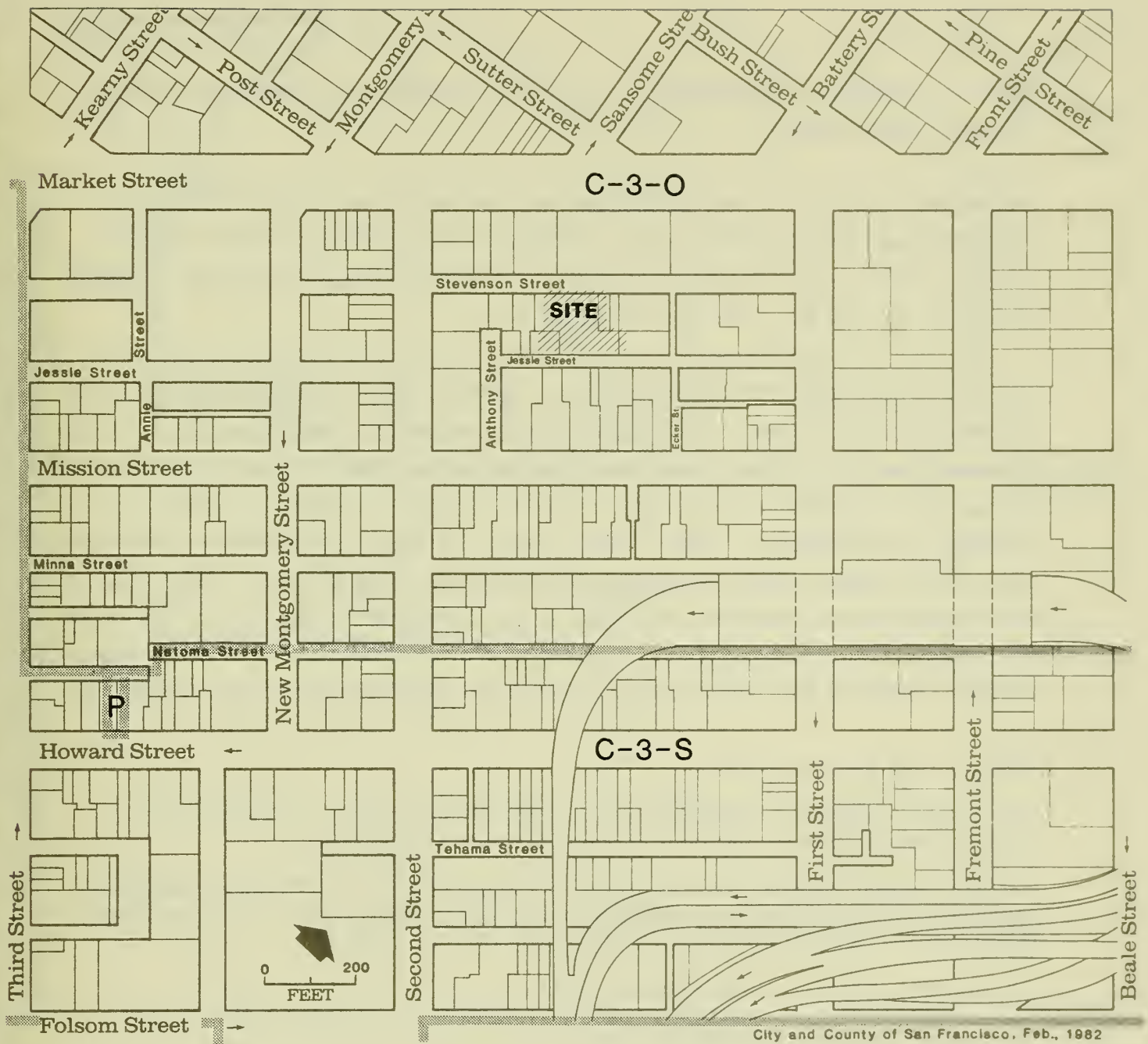
The totals indicated in Table A-3 may differ from those shown in earlier EIRs as they are based on the status of projects as of August 6, 1982. Some projects included in earlier totals have been removed from the cumulative impact analyses because they have been withdrawn from formal review or for other reasons of inactivity. On the other hand, some projects not included in earlier totals have been added to the cumulative totals because they have been activated. In sum, the lists used for the cumulative analyses in this report represent to the extent practicable the most current official record of office buildings completed, in progress, or in the review process.

This discussion of cumulative development describes in static terms a fluid situation. The environmental setting is in a constant state of flux and transition.

#### ZONING

The City Planning Code zoning classification for the site is C-3-0 (Downtown Office District) (see Figure 9, p. 21). Office and retail uses are permitted in this zoning district with a basic Floor Area Ratio (FAR) of 14 to 1/1/ (i.e., a building may have a floor area up to 14 times the area of its site).





#### LEGEND

- P Public Use Districts
- C-3-O Downtown Business Districts
- C-3-S Downtown Support District
- Shaded Area Zoning District Boundary

**FIGURE 9: Planning Code Use Districts on Site and in Vicinity**

SOURCE: San Francisco City Planning Code

### III. Environmental Setting

There is currently a moratorium on the use of development bonuses to increase office floor areas./2/

The project site is in the 700-I Planning Code Height and Bulk District, in which the maximum permitted height is 700 ft., the maximum permitted facade length is 170 ft. and the maximum horizontal diagonal dimension above a height of 150 ft. is 200 ft. (see Figure 10, p. 23).

Off-street parking is not required by the Code in the C-3-0 District; up to 7% of the gross floor area of a building may be devoted to parking as an accessory use./3/ Street trees are required by the Code in the C-3-0 District and must be installed at a minimum of 20 ft. intervals along all street frontage of the property lines. Trees can be located either within a set-back area on the lot or within the public right-of-way along the lot. This requirement may be modified or waived if it is determined that the sidewalk is of inadequate width, trees would interfere with utilities, or there are other reasons regarding the public welfare, or where installation is impractical./4/

#### NOTES - Land Use and Zoning

/1/ Section 124, City Planning Code. Types of floor uses included in the calculation of Floor Area for FAR purposes are defined therein.

/2/ Development bonuses are specified in Section 126, City Planning Code; the moratorium on their use was adopted by the San Francisco Board of Supervisors, Ordinance No. 240-80 amending Section 126, July 1, 1980.

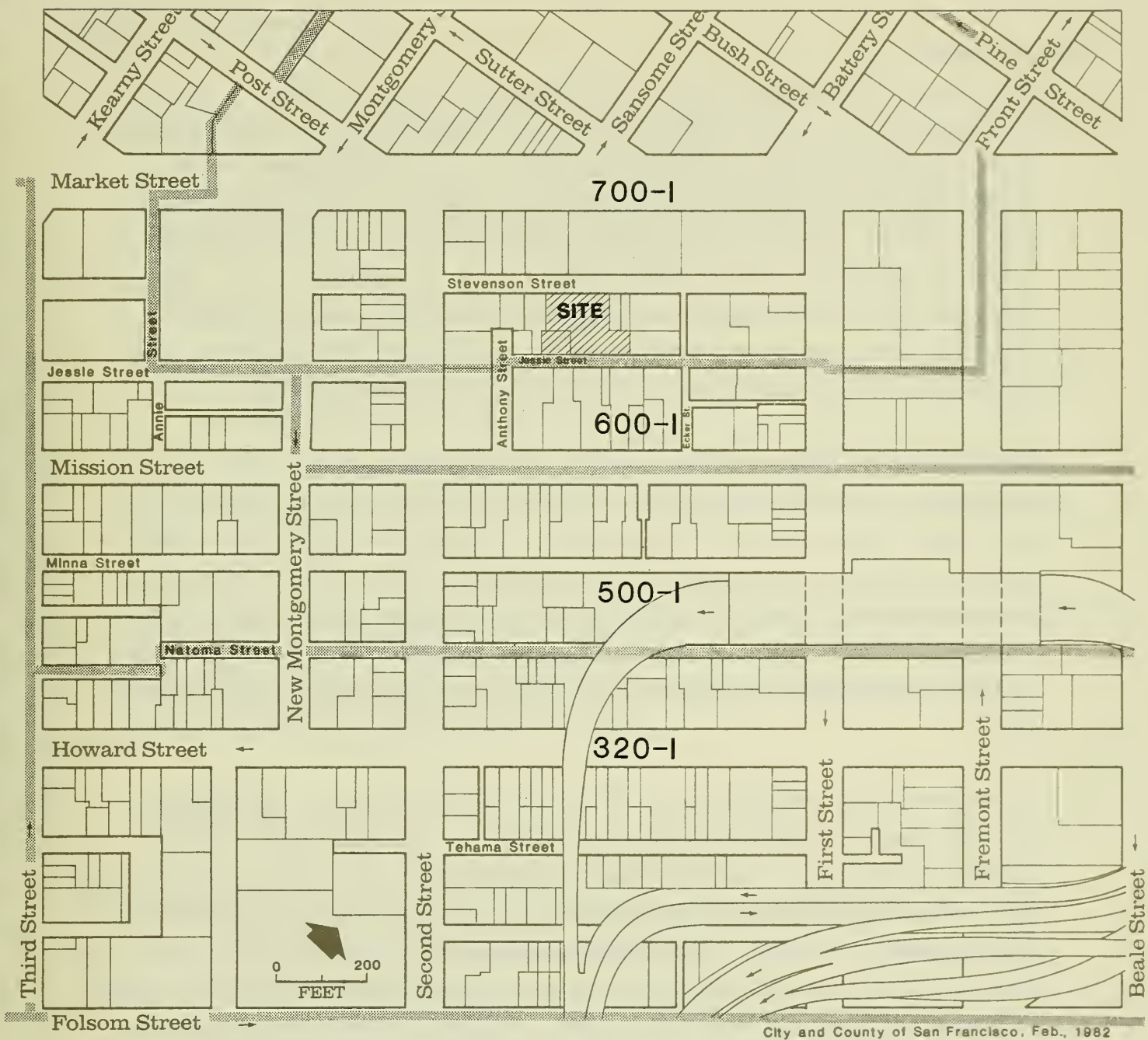
/3/ Section 204.5(c), City Planning Code.

/4/ Section 143, City Planning Code.

#### B. ARCHITECTURAL RESOURCES AND URBAN DESIGN

##### ARCHITECTURAL RESOURCES

The project site contains two buildings (the Hertzka Warehouse at 64 Jessie St./1/ and a parking garage at 71 Stevenson St.), both of which were rated "C" in an architectural and historical resource survey of the downtown area conducted by the Foundation for San Francisco's Architectural Heritage



City and County of San Francisco, Feb., 1982

#### LEGEND

HEIGHT AND BULK DISTRICTS	HEIGHT LIMIT	HEIGHT ABOVE WHICH MAXIMUM DIMENSIONS APPLY	MAXIMUM PLAN DIMENSIONS	
			LENGTH	DIAGONAL DIMENSION
700-I	700'	150'	170'	200'
600-I	600'	150'	170'	200'
500-I	500'	150'	170'	200'
320-I	320'	150'	170'	200'

Height and Bulk District Boundary

**FIGURE 10:**  
Planning Code Height and Bulk Districts on Site and in Vicinity

SOURCE: San Francisco City Planning Code



### III. Environmental Setting

("Heritage"). This survey rated buildings from a high of "A" to a low of "D" (see Appendix B, p. 404). Buildings rated "C" are recognized (by Heritage) to be of contextual importance; these buildings "are distinguished by their scale, materials, compositional treatment, cornice and other features."/2/ Such buildings establish the setting for more important buildings and add visual diversity and architectural character to the downtown area. Neither of these buildings was included in a city-wide inventory of architectural resources conducted by the Department of City Planning (DCP) in 1976 (see Appendix B, p. 404, for an explanation of the evaluation system).

The five-story warehouse at 64 Jessie St. was built in 1924. It is constructed of reinforced concrete, with skeletal articulation of the Jessie St. facade (this refers to a functional, unornamented facade design which reflects structural components of the building). The parking garage at 71 Stevenson St. is a two-story structure of reinforced concrete and brick; it was built in 1923. Both of these structures represent typical industrial buildings that were constructed in the South of Market area between 1900 and 1925.

The project block contains three "B" rated buildings and one "A" rated building (two of these buildings are included in the Department of City Planning inventory). The Wells Fargo Building at 71 Second St., rated "A" by the Heritage Survey and "3" by the DCP Inventory, was designed by Meyers and Ward and built in 1902. The building was damaged in 1906 and rebuilt with an additional two stories. The eight-story building represented an early example of fire-proof construction for its time. It is of steel frame construction with cinder concrete cladding; the two-story base is clad in granite.

The Chancery Building at 562 Mission St. is rated "B" by the Heritage Survey; it is not listed in the DCP Inventory. The six-story building was built in 1919 and represents the earliest known example of mushroom column drop panel construction, an important breakthrough in reinforced concrete design. (Mushroom columns are supporting columns which are thicker at the top than at the bottom.) It is of reinforced concrete construction with Renaissance/Baroque ornamentation.

### III. Environmental Setting

One Ecker, at 16 Jessie St., is rated "B" by the Heritage Survey; it is not listed in the DCP Inventory. It is a four-story building of brick construction with iron posts. This warehouse building was constructed in 1906, and renovated for retail/office use in 1972.

The California Farmer Building, at 83 Stevenson St., is rated "B" by the Heritage Survey and "1" by the DCP Inventory. It was designed by Willis Polk and constructed in 1908. The structure was originally used as a post office. It is of brick construction with Renaissance/Baroque ornamentation. The single-story building has a pedimented temple front with five large arched windows equally distributed across the street facade. An iron eagle tops the peak of the pediment.

Figure 11, p. 26, identifies these and other buildings in the project vicinity that are included on the list of Architecturally and/or Historically Significant Buildings in the C-3 District adopted by the City Planning Commission (Resolution 8600, May 29, 1980).

#### URBAN DESIGN

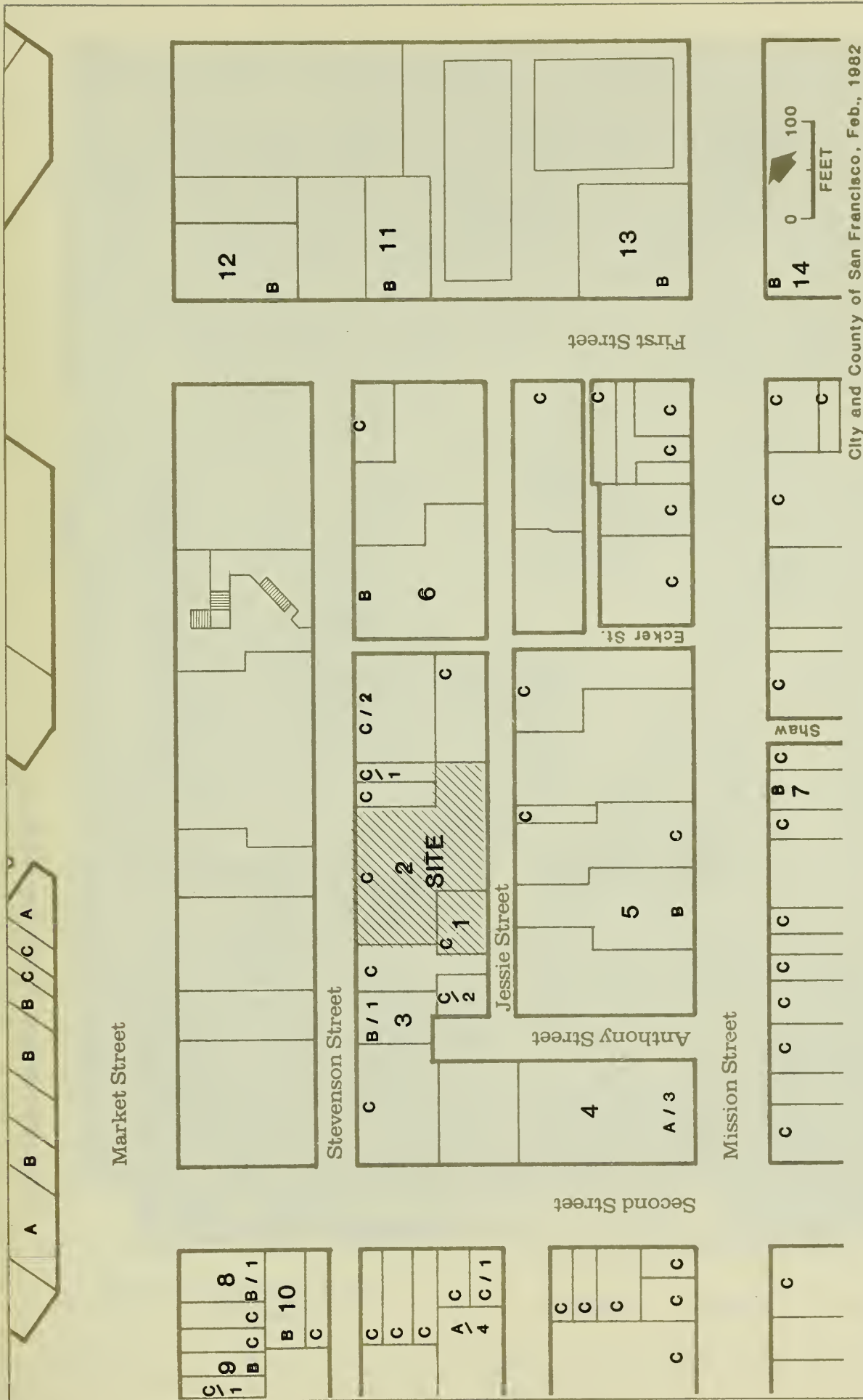
- The project site is in an area that functions as a visual transition between the large-scale, new construction that has occurred northerly of the site across Stevenson St. and the more moderate-scale, older development that exists adjacent to and southerly of the site (see Figures 12-14, pp. 27-29). The high-rise office development located along the blocks that front the south side of Market St. establishes a strong edge which defines the boundary of the Financial District. This strong building edge [North of Market Financial District], established during the building boom of the early 1970's, is being altered by highrise construction south of Market St. Existing highrise buildings east of Second St. (Ecker Sq., Five Fremont) have created a precedent for highrise construction in this area. Proposals for buildings near the project site, such as Lincoln Plaza, 90 New Montgomery, and One New Montgomery Place would contribute to the southward shift of the Financial District's boundary. Frequently these high-rise buildings are set back from lot lines, with landscaped plazas occupying the unbuilt portions of the site. Building surface materials usually consist of metal, glass, stone and



### III. Environmental Setting

concrete, which create smooth-surfaced facades.

● The blocks south of Market in the downtown are about four times the size of blocks north of Market St.; the south of Market blocks are often intersected by a network of narrow mid-block streets and alleys that provide through-block access for pedestrians and vehicles. The buildings tend to be built up to lot lines (maintaining a continuous facade line) and constructed of brick and reinforced concrete. Ecker St. in the project block is closed to through traffic. The restaurant, bookstore, banners, plaza and small-scale brick buildings on Ecker St. and on Stevenson St. near Ecker contribute to a sense of pedestrian activity and scale in this area.



City and County of San Francisco, Feb., 1982

# LEGEND

NO.	BUILDING
1	64 Jessie St.
2	71 Stevenson St.
3	California Power Bldg.
4	83 Stevenson St.
5	4415 Fargus Bldg.
6	71 Sutter St.
7	Golden Gate University
8	Law Library
9	562 Mission St.

## NO. BUILDING

11	Blake, Moffitt & Towne Bldg.
12	41 First St.
13	Sheldon Bldg.
14	9 First St.
15	Terminal Plaza Bldg.
16	440 Mission St.
17	Transbay Terminal
18	• City Landmark

## RATINGS

HERITAGE / DCP  
A / 3

Ratings are shown for all buildings;  
only numbered buildings are listed.

FIGURE 11: Architecturally

Significant Buildings

Near the Project Site

SOURCE: Environmental Science Associates, Inc.



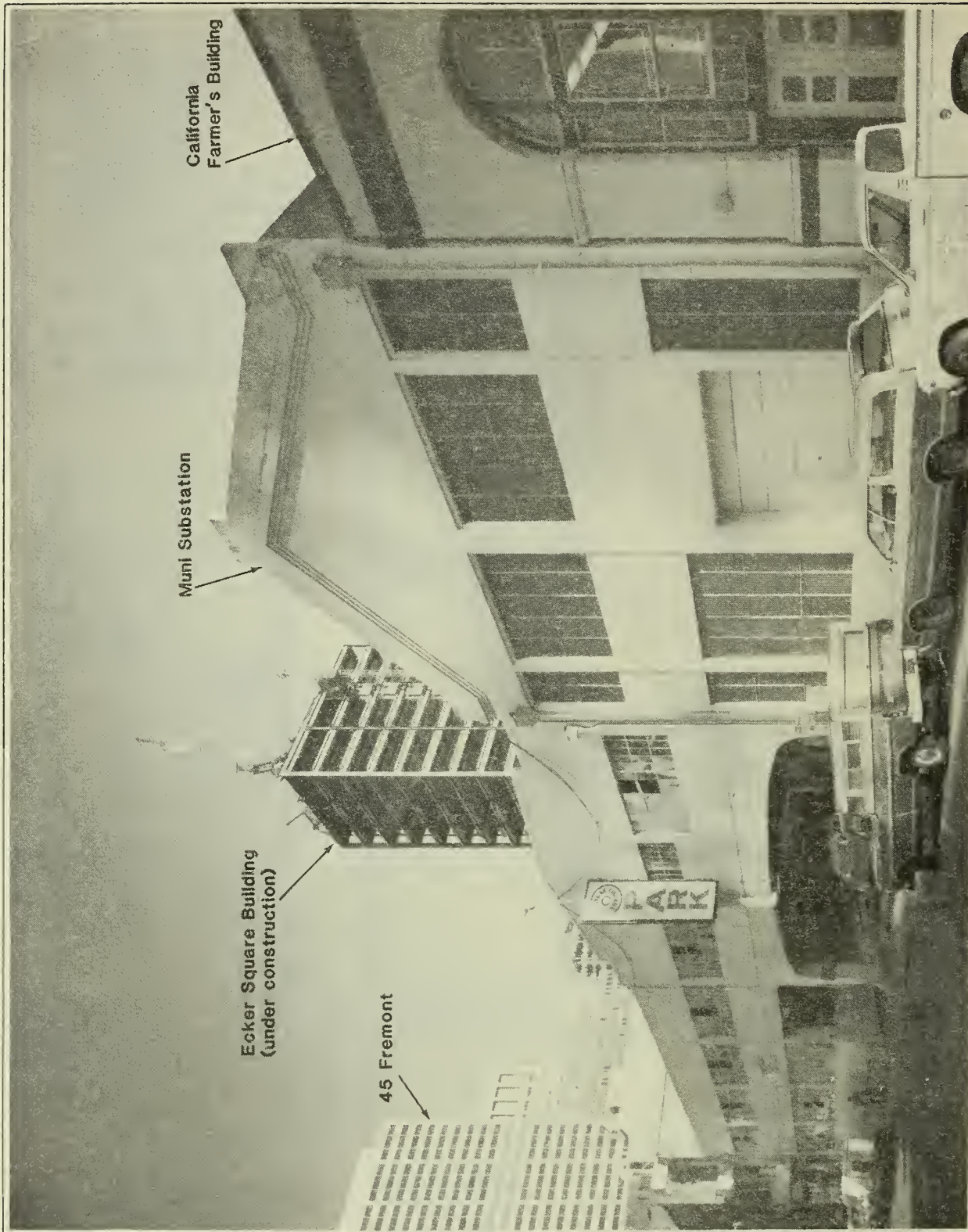


FIGURE 12: Stevenson St. Frontage

SOURCE: Environmental Science Associates, Inc.

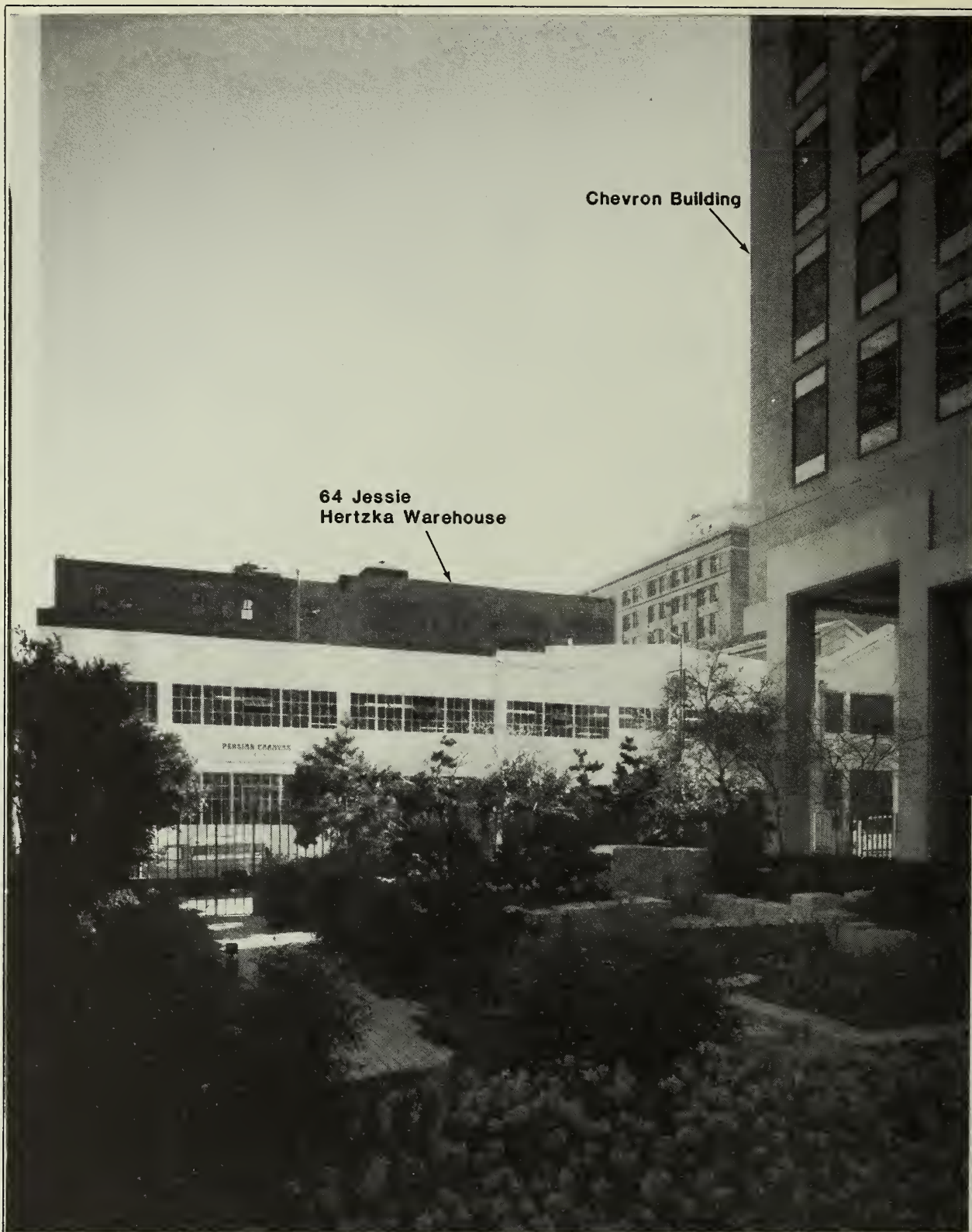




← SITE →  
64 Jessie St.  
Hertzka Warehouse

SOURCE: Environmental Science  
Associates, Inc.

FIGURE 13: Jessie St. Frontage



SITE  
71 Stevenson St. Garage

SOURCE: Environmental Science  
Associates, Inc.

FIGURE 14: View Of Site Across  
Chevron Garden Plaza



### III. Environmental Setting

Overall, the area reflects visual diversity and architectural complexity in its combination of large- and small-scale structures, contrasting building materials and variations in streetscape settings.

#### NOTES - Architectural Resources and Urban Design

/1/ The warehouse at 64 Jessie St. is rated "B" in the Heritage Survey. However, the building should have been rated "C" as an error was discovered in the translation from the qualitative rating to its corresponding numerical value in the evaluation system. (See letter dated February 12, 1982 to Sally Maxwell, Office of Environmental Review, from Michael Corbett, Architectural Historian, Heritage. A copy of this letter is available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., 5th floor.

/2/ The Foundation for San Francisco's Architectural Heritage, Splendid Survivors, California Living Books, San Francisco, 1979, p. 13.

#### C. EMPLOYMENT, HOUSING AND FISCAL FACTORS

##### ON-SITE EMPLOYMENT

The parking garage now operating at the project site employs about four full-time workers. The warehouse employs one full-time worker. There are no other uses or businesses on the project site.

##### SAN FRANCISCO AND REGIONAL OFFICE SPACE MARKET

##### Existing and Proposed Office Space

San Francisco is the major office center in the Bay Area with approximately 60.6 million gross sq. ft. of office space (see Table A-1, Appendix A, p. 397)./1/ During the 1970s, space in downtown office buildings was added at a rate of about 1.5 million sq. ft. per year. In 1981 and 1982, the average rate of office space additions was about two million gross sq. ft. annually. Office buildings with a total space of approximately 32.3 million sq. ft. were constructed between 1960 and 1981.



### III. Environmental Setting

#### Vacancy Rates/Commercial Rents

- On the basis of a 1982 citywide survey of 290 office buildings, the San Francisco Building Owners and Managers Association (BOMA) reported a citywide vacancy rate of 6%./2/ This rate is an increase over the 3.69% rate reported by BOMA in an earlier 1982 survey. According to a December 1982 Coldwell Banker survey, the vacancy rate in downtown San Francisco office buildings (new, existing and major renovations) was 5.7% in December,/3/ compared to a September rate of 3.6%. The current 5.7% vacancy rate is the sixth lowest in the nation among major downtown financial districts./3/ For comparison, the December rate is 10.3% nationally; 8.3% for Chicago; 3.3% for downtown Manhattan; and 10% for Dallas./3/
- Grubb and Ellis reports an August 1982 vacancy rate of 10% in first-class office space (applies to users of more than 25,000 sq. ft.) in downtown San Francisco./4/ The Coldwell Banker and Grubb and Ellis vacancy rates are not directly comparable, as each survey includes different numbers and types of buildings. Both surveys, however, indicate a short-term upturn in the downtown office vacancy rate. The recent, short-term increase in the downtown vacancy rate may be attributable to several factors, including an increase in the amount of available office space (due to new space being completed and space available for sublease), a short-term decrease in the demand for office space, and the national economic recession. One effect of the shortage of office space in San Francisco has been to stimulate office development and increase demand for existing office space elsewhere in the Bay Area. Some businesses move their clerical, support, and non-corporate functions to outlying areas while maintaining headquarters and main branch offices in San Francisco./4b/ The City of Oakland and San Mateo and Contra Costa Counties, in particular, are experiencing increased demand from businesses relocating from San Francisco. For example, approximately 6.0 million sq. ft. of office space in nine new buildings are currently proposed for the City of Oakland over the next 10 years./5/
- Because of historically high demand and increased construction costs, interest rates, land prices and operation expenses, annual rents for commercial office space in the downtown Financial District have tripled in the last decade (from

### III. Environmental Setting

\$8.50 per sq. ft. in 1970 to about \$30 per sq. ft. in 1981)./6/ Current annual rents in older buildings in the Financial District are less expensive than those in new highrises, averaging between \$20-\$35 per sq. ft. and \$12-\$28 per sq. ft. south of Market St./7/ San Francisco annual rents now average \$35 to \$50 per sq. ft. in new high-rise buildings. These compare to average commercial rents in Oakland of \$15 per sq. ft.; on the Peninsula of \$18-\$30 per sq. ft.; and in Contra Costa County of \$18-\$20 per sq. ft./7/ Should the recent rise in vacancy rates continue, the upward pressure on current and future commercial rents would be expected to decline proportionately in San Francisco and outlying areas. Such market conditions could be beneficial to future lessees of office space.

#### HOUSING

Both regional and San Francisco housing stock are characterized by low growth rates, low vacancy rates, and high purchase and rental costs in relation to typical wages paid. This combination of factors and high mortgage costs have tended to constrict the supply and affordability of housing in San Francisco.

San Francisco had about 322,000 housing units as of the end of 1980; about two-thirds of the housing stock is rented and one-third is owner occupied./9/ The number of new single- and multiple-housing units in San Francisco (authorized by building permits) decreased 34.4% between 1979 and 1980./10/ The average 1980 market value of a single-family house was \$140,000 in the Bay Area and \$148,000 in San Francisco./11/ The 1980 Census reports a 1980 median value of \$104,600 for single-family units (not including condominiums), and a vacancy rate of 0.6%./12/

#### FISCAL

##### Property Tax Revenues

The assessed valuation of the project site in 1981 was approximately \$780,000./13/ Based on the fiscal year 1981-82 property tax rate of \$1.19 per \$100 of assessed valuation, the parcel generated about \$9,300 in property tax revenues. The distribution of these revenues are shown in Table 2.

### III. Environmental Setting

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TABLE 2: DISTRIBUTION OF PROPERTY TAX REVENUES, FISCAL YEAR 1981-82

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<u>Agency</u>	<u>Ad Valorem Tax Rate*</u>	<u>Percent</u>	<u>Revenues**</u>
City and County of San Francisco	\$0.945	79.4	\$7,391
S.F. Unified School District	0.142	11.9	1,108
S.F. Community College District	0.025	2.1	195
Bay Area Air Quality Management District	0.002	0.2	18
BART	<u>0.076</u>	<u>6.4</u>	<u>596</u>
TOTAL	\$1.19	100.0	\$9,309

\*Rounded

\*\*Based on the 1981-82 composite tax rate of \$1.19 per \$100 of fair market valuation.

SOURCE: San Francisco Controller's Office

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#### Parking and Payroll Taxes

Uses on the site generate parking and payroll taxes to the City's General Fund. Average annual earnings of the five full-time employees at the site in 1981 are estimated to be \$10,000./14/ At the 1981-82 payroll rate of 1.5% of total earnings, present employment is estimated to generate about \$750 annually to the city. The parking garage on the site generates about \$52,200 to the General fund from the 15% parking tax./15/

Based on the present business on the site and the number of employees and wages paid, the revenue to the City's General Fund from the property, payroll and parking taxes totaled about \$62,250 in 1981.

#### Costs and Net Revenues

The City incurs costs in serving the existing buildings. Police, fire and general government expenditures are supported primarily by the General Fund. Most street maintenance, street improvement, and traffic control costs are supported by other revenue sources such as fees, fines, and federal and state aid, which have been declining.



### III. Environmental Setting

#### NOTES - Employment, Housing and Fiscal Factors

/1/ San Francisco Department of City Planning, "Major Office Building Construction in San Francisco Through 1981, In Gross Square Feet; and "Cumulative Office Development in Downtown San Francisco As of August 6, 1982" (see Appendix A, Tables A-1 and -3, pp. 326 and 328).

- /2/ Elmer Johnson, Building Owners and Managers Association, telephone conversation, December 22, 1982.
- /3/ Coldwell Banker, "Office Vacancy Index of the United States," December 31, 1982. San Francisco vacancy rates are part of a national survey of 24 major downtown districts conducted quarterly. A copy of the December 31, 1982 survey is on file and available for public review at the Office of Environmental Review, 450 McAllister St., 5th Floor.
- /4/ William J. McCubbin, Senior Vice President/District Manager, Grubb and Ellis, telephone conversation, September 7, 1982.
- /4b/ Association of Bay Area Governments (ABAG), April 1981, Bay Area Office Growth, Working Papers on the Region's Economy, Number One.
- /5/ City of Oakland, Department of City Planning; "Major Buildings in the Central District," January 26, 1982.
- /6/ Department of City Planning Memorandum to the City Planning Commission, "South of Market Interim Controls," January 26, 1982.
- /7/ James Osmond, Senior Broker, Coldwell Banker, San Francisco Office, telephone conversation, January 4, 1983; Mr. Emory, Senior Commercial Real Estate Broker, Grubb and Ellis, San Francisco Office, telephone conversation, January 3, 1983; Scott Newman, Senior Broker, Coldwell Banker, Oakland Office, telephone conversation, January 6, 1983; and Jan Lunquist, Coldwell Banker, San Mateo Office, telephone conversation, January 6, 1983.
- /8/ Assuming that demand remains relatively constant, rents in outlying areas are expected to increase in 1983 and 1984 as new space comes on line. One reason for the comparatively low rents in outlying areas is the lack of competitive space available. For example, new buildings in Oakland are expected to lease for \$24 per sq. ft. in 1983, which will be comparable to rent for new buildings in the South of Market area. (Valerie Miles, Senior Broker, Coldwell Banker, Oakland Office, telephone communication, April 23, 1982.)
- /9/ Michael Estrada, Planner, Department of City Planning, telephone communication, April 30, 1982; and Department of City Planning, Residence Changes in the San Francisco Housing Inventory, 1978, September 1979.
- /10/ Real Estate Research Council of Northern California, Northern California Real Estate Report, vol. 33, No. 1, April 1981.
- /11/ Security Pacific Bank, "Monthly Summary of Business Conditions - Northern Coastal," March 31, 1981, p. 2.

### III. Environmental Setting

/12/ Dean Macris, Director of Planning, Department of City Planning, Memorandum entitled "1980 Census Information," March 25, 1982.

/13/ San Francisco Controller's Office.

/14/ Assuming the labor on-site is unskilled, the average annual wage for existing workers was estimated to be about \$10,000 (based upon the minimum wage of \$4.80 per hour).

/15/ The parking garage has about 290 parking spaces. The gross receipts from the parking garage are unknown; therefore, the parking tax (15%) was based on the current monthly rate of \$100/mo/space (the rate charged to long-term parkers who use approximately 80% to 90% of total parking spaces). This amounts to \$29,000/mo or \$348,000/yr. The parking tax for the estimated gross receipts (\$348,000/yr) would be \$52,200/yr.

#### D. TRANSPORTATION

##### TRANSIT

The site area is served by electric trolley, bus and light rail vehicle (LRV) lines of the San Francisco Municipal Railway (Muni). Regional service is provided to and from the East Bay by the Bay Area Rapid Transit District (BART) at the Montgomery St. Station on Market St., and by the Alameda - Contra Costa (AC) Transit District buses from the Transbay Transit Terminal about one block due east of the site. Peninsula service is provided by the Southern Pacific Transportation Company from the terminal at Fourth and Townsend Sts., and by the San Mateo County Transit District (SamTrans), which has bus routes and stops along various streets in the area, including Mission St., and transfer connections at the Daly City BART Station. The Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit) provides peak-period bus service from and to Marin and Sonoma Counties through a.m. stops on Battery St. and First St. near Market St., at the Transbay Transit Terminal, and p.m. stops at the Transbay Transit Terminal, on Fremont St., on Pine and Sansome Sts., and at stops along Howard and Folsom Sts. Golden Gate Transit also provides ferry commute service to terminals in Larkspur and Sausalito from the Ferry Building, and Harbor Carriers, Inc. provides service to Tiburon. Golden Gate Transit operates a van-pooling program to North Bay areas not served by motor coach routes. A car pooling program, RIDES for Bay Area Commuters, provides leasing and matching services for establishing van



### III. Environmental Setting

and car pools. Independently owned and operated jitneys provide additional transit service on Mission St. during the peak commute hours.

#### Muni

Muni has established maximum load factors for vehicle types, which are used as a basis for scheduling peak-hour trips on each route; the factors range from 144% to 220% of seated capacity. Loading in excess of a maximum load factor increases passenger loading time, reduces schedule adherence, and provides a low level of passenger comfort (see Appendix D, Figure D-1, p. 413, for pictorial representations of peak-period loading on several lines).

Market, Mission, First and Second Sts. in the vicinity of the site are Transit Preferential Streets./1,2/ The principal transit preferential measures now in effect are exclusive bus (diamond) lanes, the prohibition of left turns, and curb-side parking prohibitions (tow-away zones) on Mission and First Sts., and an exclusive transit turning movement from eastbound Market St. to southbound First St. In addition, First St. is designated as a Transit Street and Market and Mission Sts. are designated as Transit Arterials./1/

Muni has plans to increase the capacity of its downtown service in several ways. Fifteen additional Light Rail Vehicles (LRVs) are on order for use in the Muni Metro System. Construction of a loop to replace the existing stub-end terminal at The Embarcadero is planned, with a possible surface extension on The Embarcadero; implementation is partly contingent upon federal funding which has not yet been secured. Also planned is the introduction of articulated buses with a 50% larger capacity than that of conventional buses. None has been ordered to date./3,4/ Further integration of BART into the downtown transit system is planned by allowing use of Muni Fast Passes for travel on BART trains within San Francisco. Additional increases in above-ground route capacity are planned by restrictions on automobile use on Market St. and other streets.

Present scheduled outbound capacity on 52 downtown routes between 4:30 and 5:30 p.m. is about 47,400 passengers. The projected capacity in January 1984 is about 50,900./5/ The increase in capacity is planned to match



### III. Environmental Setting

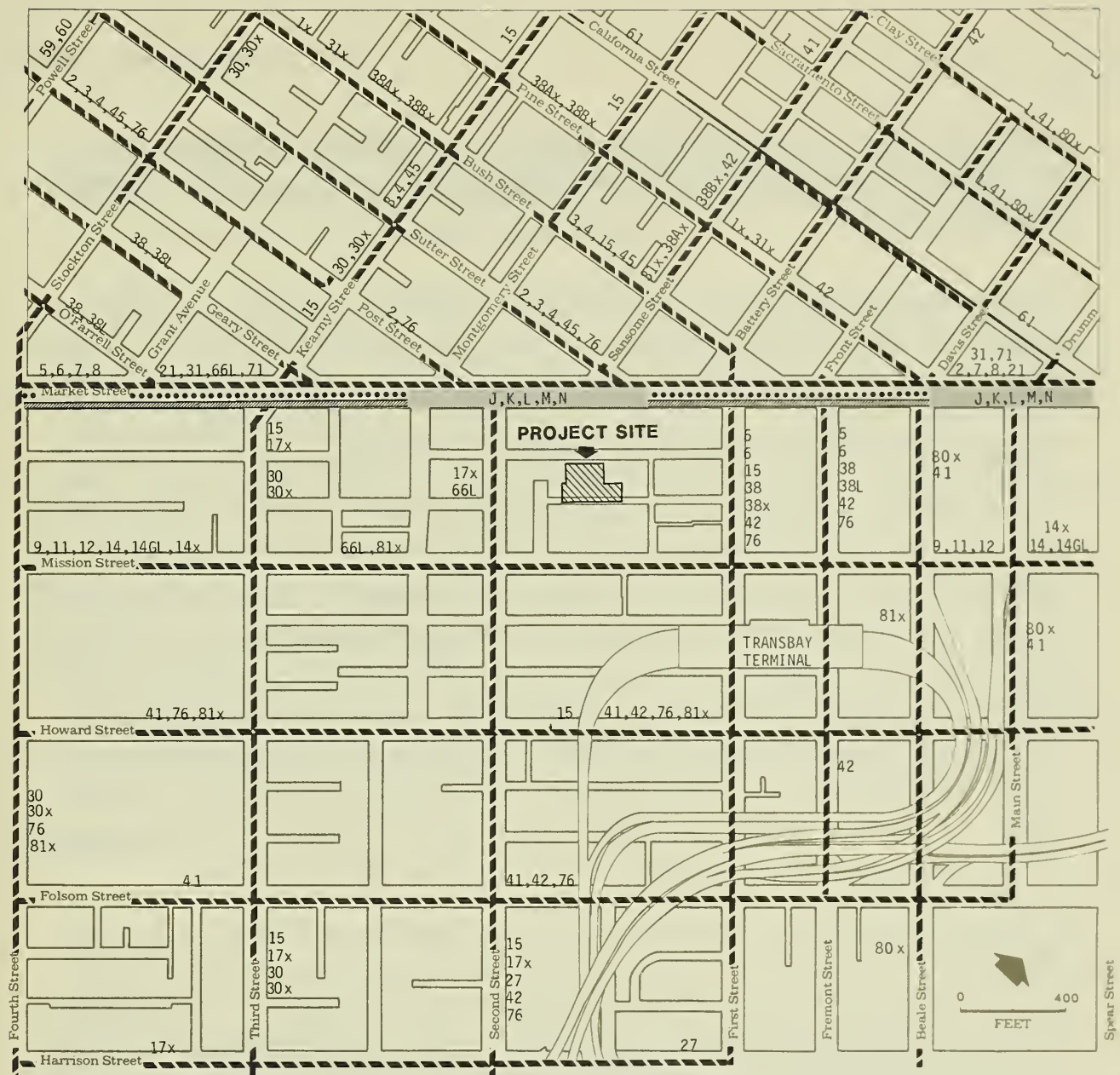
approximately the increase in demand, so that present operating conditions, such as excessive crowding on some vehicles, are not expected to be improved.

The site is centrally located for access to all Muni lines. All Muni Metro LRV lines serve the site from the Montgomery St. subway station at Montgomery and Market Sts. (see Figure 15, p. 38). Thirty-nine bus and trolley lines stop within 2,000 feet (walking distance) of the site and/or at downtown terminals. Bus service to the Southern Pacific Depot is available within one block via Routes 15, 27 and 42, which have stops on First or Fremont Sts.

#### PEDESTRIANS

- The sidewalks on Stevenson St. are 8 ft. wide on both sides. Illegal parking on the north sidewalk frequently occurs, as the curb can be mounted, partially blocking the way for pedestrians. The narrow (three ft.) "sidewalks" on Jessie St. receive little or no use by pedestrians, who walk in the street. (The curbs on Jessie St. serve primarily to keep maneuvering vehicles from striking building walls.) As on Stevenson St., vehicles are often parked illegally on the north (site) side, by mounting the curb. Pedestrian traffic on Jessie and Stevenson Sts. peaks at midday, when there are about 800 pedestrians per hour along the north and south sidewalks of Stevenson St. This traffic represents an estimated 11% of the total capacity of these sidewalks, when it is assumed that half of the sidewalk on the north side is blocked by illegally parked vehicles./6/

Pedestrian traffic in Ecker and First Sts. peaks during the p.m. hour of 4:30-5:30, when there are about 1,300 pedestrians per hour on Ecker St., and 1,500 per hour on the west sidewalk of First St. This north-south pedestrian movement all but predominates on the block (except for 2,500 per hour on Market St.) during the p.m. peak hour. Ecker St. is 10 ft. wide (property line to property line) along its narrowest width: that portion between Stevenson and Jessie Sts. Along this portion, Ecker St. operates at an estimated 16% of capacity during the p.m. peak hour, with assumed use of the street as well as the sidewalk (37% if pedestrians confined their paths to the sidewalk there). On the west side of First St. the peak-hour flows represent





### III. Environmental Setting

an estimated 18% of the sidewalk's capacity. On Mission and Market Sts., peak-hour pedestrian traffic is estimated at six percent and 12% of capacity, respectively./6/

Under the worst condition identified above (pedestrian traffic of 18% of capacity on First St. during the p.m. peak hour) pedestrians have a virtually unrestricted choice of walking speed; maneuvering is needed to avoid conflicts and to pass. However, conditions in crosswalks and on the corners of the intersection of First and Mission Streets are less favorable. The east and west crosswalks operate at an estimated 65% of capacity during the p.m. peak hour, and the north crosswalks at 30%-40% of capacity. Pedestrians crossing Mission St. effectively block left and right turns onto Mission St. from First St. for all of the First St. vehicular green signal indication. (Left turns proceed on yellow (about three or four per cycle) and right turns are made on the red and yellow indications.) The reservoir space (for the purposes of this report reservoir space is defined as the area of sidewalk which would be formed if crosswalk lines were extended to building lines) on the northwest corner of the intersection is roughly half used, so that considerable blockage of one crosswalk's flows by the other's occurs at that location.

#### VEHICULAR TRAFFIC

Access to freeways connecting with the East Bay, San Francisco International Airport and the Peninsula is provided by the Embarcadero Freeway, with ramps on Main St. at Mission St. (off-ramp, northbound), Beale St. at Mission St. (on-ramp, southbound), Clay St. at Davis St. (on-ramp, southbound), and Washington St. at Davis St. (off-ramp, northbound). Another ramp at First and Harrison Sts. (on-ramp, northbound) provides direct access to the Bay Bridge approach.

Market, Fremont and Second Sts. are designated Major Thoroughfares in the Thoroughfares Plan of the Downtown Transportation Plan of the Transportation Element of the Comprehensive Plan./7/

Market St. is a two-way, four-lane street with some right-turning lanes at certain intersections. Mission St. operates as a two-way, four-lane street



### III. Environmental Setting

with the outer lanes designated as diamond lanes for bus use only from 7:00 a.m. to 6:00 p.m. west of Beale St. First St. is one-way southbound with four lanes between Market and Mission Streets.

At the intersection of Mission St. with First St., the pedestrians crossing Mission St. interfere with movements onto Mission St. by traffic southbound on First St. Curb lanes on First St. often back up to Jessie St. or Stevenson St. as a result of these vehicle-pedestrian conflicts during the p.m. peak hour. The through-lanes at this intersection operate under better conditions, at about 2/3 of capacity on Mission St. and 50% of capacity on First St.

Vehicular traffic is light on Stevenson St. and Jessie St. during the p.m. peak hour, consisting of about 170 and 50 vehicles, respectively. Ecker St. is now closed to vehicular traffic because of the construction of the Ecker Square Building at 25 Jessie St., and will be closed permanently to vehicular traffic (except emergency vehicles) after completion of the project./8/

#### PARKING

The site is in an area designated in the Downtown Transportation Plan/9/ as the Downtown Core Automobile Control Area, which is defined in the Plan as an area where "a continuing effort should be made to reduce the impact of the private commuter vehicle";/10/ the area designated as appropriate for short-term parking facilities is located about 1,000 feet to the south./11/ No curbside parking is currently provided on either side of Mission, Market or First Sts. on the project block.

The available curb space (not along curb cuts) on the south sides of Jessie and Stevenson Sts. on the project block is normally fully occupied by parked passenger vehicles, even though it is primarily designated as yellow and red zones. Parking is prohibited on Market St. at all times and on First St. and Mission St. during tow-away zone hours of 7:00 a.m.-9:00 a.m. and 4:00 p.m.-6:00 p.m. There is some metered parking (1 hour) along Mission St. at other hours, and on Second St. (30 minutes) at all hours except during a 7:00 a.m.-1:00 p.m. loading zone period. Parking is prohibited on the north sides of Stevenson and Jessie Sts., but many drivers park there illegally by

### III. Environmental Setting

mounting the curb. These conditions on Jessie and Stevenson Sts. suggest that enforcement of parking regulations is lax there.

● The existing three-level parking garage on-site can accommodate about 300 vehicles. Recent studies indicate little unoccupied long-term parking in the downtown core area./12/ A 1981 survey of the area within 2,000 ft. of the site showed 500 spaces available out of 12,500 spaces, a vacancy rate of 4%./13/ Vacancy rates of long-term spaces in the area within 2,000 ft. of the site ranged from 7% to 10% for the 12,500 long-term spaces, 80% of which were over 1,000 feet from the site./14/ Of these 12,500 spaces, 700 are located on lots that would be removed by projects either approved or under review: 90 New Montgomery, 70 spaces; 315 Howard, 20 spaces; 388 Market, 40 spaces; and 333 Bush, 360 spaces. Fifteen lots, containing 1,350 temporary spaces, are on sites within the Yerba Buena Center Redevelopment Area, which is scheduled for full completion in 1988. The Yerba Buena Center Redevelopment Plan could potentially provide approximately 5,200 off-street parking spaces (YBC Final Second EIR Supplement, certified January 4, 1983).

#### NOTES - Transportation

/1/ Transit Preferential Streets are streets where interference with transit vehicles by other traffic should be minimized. Transit Streets are streets which should be oriented primarily or exclusively to satisfaction of transit requirements. Transit Arterials are routes of major arterial transit lines.

/2/ Transit Preferential Measures are specified in the San Francisco Municipal Railway, April 1980, Five Year Plan: 1980-85, as follows:

- a) Creation and enforcement of exclusive transit lanes;
- b) Synchronization of traffic signals with the speed of transit vehicles rather than the speed of automobiles, and the use of signal devices which can be preempted by transit vehicles;
- c) Extension into the street of sidewalk curbs at bus stops so that buses may pick up passengers without having to leave and re-enter the lane of travel; and
- d) Enforcement of traffic and parking regulations which facilitate the movement of transit vehicles.

/3/ San Francisco Municipal Railway, April 1980, Five-Year Plan: 1980-85.

/4/ Susan Chelone, Transit Planner, Municipal Railway, interview, July 22, 1981.

/5/ San Francisco Municipal Railway Five-Year Plan: 1981-86.



### III. Environmental Setting

/6/ Pedestrian conditions were assessed using methods reviewed by Boris Pushkarev and Jeffrey Zupan in Urban Space for Pedestrians (MIT Press, 1975). Pedestrians were counted between 12:00 and 1:30 p.m. on Tuesday, February 23, 1982, and between 4:30 and 5:45 p.m. on Thursday, February 25, 1982.

/7/ The Thoroughfares Plan of the Downtown Transportation Plan of the Transportation Element of the Comprehensive Plan, 1972, page 19, states that the function of major thoroughfares is to "link districts within the city and to distribute traffic from and to the freeways; these are routes generally of citywide significance; of varying capacity depending on the travel demand for the specific direction and adjacent land uses."

/8/ Center City Pedestrian Circulation and Goods Movement Study, 1980, page 25-26.

/9/ Department of City Planning, 1972, amended 1977, Transportation Element of the Comprehensive Plan.

/10/ The Downtown Core Automobile Control Area is described in the Downtown Transportation Plan of the Transportation Element of the Comprehensive Plan, amended 1977, page 24, as, "that intensely populated area which functions as a financial, administrative, shopping, and entertainment center where priority must be given to the efficient and pleasant movement of business clients, shoppers and visitors; where a continuing effort should be made to improve pedestrian, transit, and service vehicle access and circulation; where priority for the use of limited street and parking space within this core should be available for these functions; and where a continuing effort should be made to reduce the impact of the private commuter vehicle."

/11/ The Downtown Transportation Plan, page 24, encourages provision of short-term parking facilities, and states that automobiles should be intercepted at short-term "parking facilities located around the core next to major thoroughfares ..." which "would be designed as replacements for those on-street spaces pre-empted by service or pedestrians within the core. Frequent transit service and adequate pedestrian ways should be provided for the final link of these trips."

/12/ San Francisco City Planning Commission, Five Fremont Center Final EIR, EE80.268, certified March 12, 1981. TJKM, Transportation Consultants, survey of the area bounded by The Embarcadero, Washington, Kearny, Third and Harrison Sts.

/13/ The parking inventory survey was conducted on November 5, 10, 13 and 17, 1980, and January 20-23 and 26, 1981 (all weekdays) between the hours of 10:00 a.m. to noon and 1:00 to 3:00 p.m. by TJKM, Transportation Consultants.



### III. Environmental Setting

#### E. GEOLOGY, SEISMOLOGY AND HYDROLOGY

##### GEOLOGY

The site is located on flat land about 3,000 ft. southwest of San Francisco Bay. The ground surface elevation ranges from about +9 to +13 ft., San Francisco Datum (SFD). The SFD has Elevation "0" set at 8.6 ft. above mean sea level. The site is completely covered by buildings. Higher land is located to the northwest at Nob Hill, to the north at Telegraph Hill and to the southeast at Rincon Hill.

A preliminary soils investigation prepared on the project site by Lee and Praszker included data from borings at the perimeter of the site and a synthesis of geologic data in the vicinity./1/ Both buildings occupying the site have basements with floors at about 10 ft. below curb level. It appears that the basements were excavated into fill deposits consisting mostly of sand and rubble. The fill was placed as early as 1850 and laid to a depth of 10 ft.-15 ft. Some of this unengineered fill may underlie the basement floors.

The fill material rests on top of clean, uniformly graded wind-blown sand which extends to a depth of 30 ft. below the ground surface. The sand, in turn, rests on soft compressible Bay mud ranging in thickness from 10 ft. to 17 ft. at the site. Immediately below this Upper Bay mud are dense sands with varying amounts of clay; these deposits extend to an average depth of 85 ft. Underlying the sand are several layers of stiff clays called the Lower Bay Clays. These clays are similar in composition to the Upper Bay mud, but are less susceptible to consolidation when loads are placed on them. The Lower Bay clay deposits rest on bedrock, which is probably Franciscan formation material./2/ The depth to bedrock is about 225 ft.; or bedrock starts at about Elevation -215 SFD (see Appendix E, p. 353, for a listing of probable sediment layers).

##### SEISMOLOGY

No active faults (faults which have an historic record or other geophysical evidence of movement within approximately the last 10,000 years) are known to

### III. Environmental Setting

exist within San Francisco. Several active faults affect San Francisco; these are the San Andreas Fault, about 9 miles southwest of the site; the Hayward Fault, about 16 miles to the east; and the Calaveras Fault, about 30 miles to the east.

Both the San Andreas and the Hayward Faults have histories of major and minor movements. Earthquakes can be expected in this region in the future. Within the next 60 to 170 years (estimates of recurrence intervals vary), at least one earthquake of the magnitude of the 1906 San Francisco earthquake (about 8.3 on the Richter scale of magnitude, a logarithmic scale developed by Charles Richter to measure earthquake magnitude by the energy released) and several earthquakes comparable to the 1957 Daly City earthquake (about 5.3 on the Richter Scale) can be expected to affect the proposed building./3/

According to the Blume/URS study, San Francisco Seismic Safety Investigation, Geologic Evaluation (1974), potential earthquake-induced groundshaking at the site would be "strong" in a 1906-type earthquake./4/ That report indicates that the site is subject to liquefaction potential/5/ and subsidence hazard./6/ The report also indicates that the site is an area where the existing buildings would be subject to "heavy damage" in a 1906-type earthquake./7/ Using information in the preliminary geotechnical report, the consulting geologists have concluded that the natural soils beneath the site will not be subject to compaction, liquefaction or internal disintegration during an earthquake./1/ However, these hazards would be expected for the artificial fill if much of it is located beneath the basements on the site. The hazard of densification and compaction cannot be predicted without further geotechnical measurements, because of wide variation in the fill quantity and depth.

#### HYDROLOGY

No water bodies, springs or water courses are located on or near the project site. The site is low-lying and if surrounding areas were naturally drained, it would receive the runoff from the surrounding areas to the north and west. Surface runoff is generally greatest during the wet-weather period between November and April.



### III. Environmental Setting

Stormwater runoff is discharged into a combined sanitary sewer and storm drain system and is transported to the North Point Water Pollution Control Plant. The system is designed to handle the runoff which might occur during a five-year storm./8/ Runoff from larger storms exceeds the capacity of the combined system, and the excess is carried in some city streets. In addition, stormwater runoff currently causes overflows of wastewater into the Bay. Wastewater management system improvements currently under design would reduce the number of overflows from large storms to approximately 1-8 per year./9/

High groundwater levels occur at the site. Open standpipes installed during the test borings/1/ indicated that the stabilized groundwater in January, 1982 was at about -7 ft. SFD. Past groundwater readings in the area indicate groundwater levels ranging between elevations -5 and -13 ft. SFD.

#### NOTES - Geology, Seismology and Hydrology

/1/ Lee and Praszker, Consulting Geotechnical Engineers and Geologists, January 29, 1982, Preliminary Geotechnical Investigation, Proposed Stevenson Street Office Building, San Francisco, California.

/2/ Franciscan rocks are typical of the northern California Coast Ranges and underlie the hills of San Francisco. They consist of a mixture of dark colored muddy sediments, red, green and brown cherts and lava flows of black basalt, all material laid down on the floor of the Pacific Ocean about 100 million years ago. Cherts are rocks formed by deposits of silica containing microorganisms, which are transformed into hard, waxy or porcelain-like rocks. Also known as Franciscan Formation or Franciscan Assemblage. See Roadside Geology of Northern California, David D. Alt and Donald H. Hyndman, Mountain Press Publishing Company, Missoula, Montana, 1975.

/3/ Tocher, Don, California Division of Mines, 1959, Seismic History of the San Francisco Region.

/4/ Strong groundshaking effects are described as creating "general but not universal fall of brick chimneys, cracking of masonry and brick work." Strong (level D) groundshaking is defined in the context of a scale ranging from level A to E, with E defined as the most severe.

/5/ Liquefaction is the sudden transformation of granular material, such as loose wet sand, into a fluid-like state similar to quicksand as a result of an earthquake. The project site is located on the margin of the area mapped by Blume/URS as having liquefaction potential. The potential is created by the pressure of artificial fill, consisting mostly of loose sand and including brick and stone rubble overlying the Bay mud, and the high groundwater conditions.



### III. Environmental Setting

/6/ Seismic subsidence is the rapid settlement of the soil as a result of an earthquake. The project site is located on the margin of the area mapped by Blume/URS as having subsidence hazard. The potential is created by the presence of unconsolidated artificial fill resting on compressible Bay mud.

/7/ Heavy damage rates "3" on a scale of 1 to 4 with 4 as the worst damage. The hazard does not apply to individual structures such as those on the project site, but rather refers to a general block average condition.

/8/ A five-year storm is the largest storm which could occur in a geographic area once in approximately five years. It has a 20% probability of occurring once in any given year.

/9/ Metcalf and Eddy, Engineers, February 1978, Southwest Water Pollution Control Plant Project, Interim Planning Criteria Report.

IV. ENVIRONMENTAL IMPACT

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Effects of the project which were found not to be significant after review in the Initial Study are in the areas of land use and zoning (the project would comply with use and height and bulk limitations of the Planning Code), construction air quality (because of mitigation measures proposed as part of the project) and community services. The Initial Study is included in this report as Appendix H, p. 427.

A. ARCHITECTURAL RESOURCES AND URBAN DESIGN

Architectural Resources

The project would require the demolition of two "C" rated buildings (see Section III.B., p. 22, for a description of these buildings). In conjunction with other developments proposed and under construction in the site vicinity, including 562 Mission St. and the Ecker Square Building (25 Jessie St.), the setting would be changed from one of low-rise converted warehouse type buildings to a mixture of these older buildings with the new high-rise office buildings. Since the "C" rating is primarily a reference to the setting created by buildings, the importance of the "C" rating for other remaining nearby older structures could be lessened.

Relationship of the Project to the Comprehensive Plan

The Urban Design Element of the San Francisco Comprehensive Plan contains policies and principles intended to serve as guidelines for new development and for the preservation of architecturally/historically significant buildings. The policies contained in the plan are used as the basis for evaluation of the proposed project with respect to its urban design implications. The relationship between the applicable urban design policies of the Comprehensive Plan and the proposed project is summarized in Table 3, p. 48.

TABLE 3: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE SAN FRANCISCO COMPREHENSIVE PLAN\* AND THE PROPOSED PROJECT

APPLICABLE URBAN DESIGN POLICIES

RELATIONSHIP OF PROJECT TO APPLICABLE POLICIES

A. Policies for City Pattern

1. Policy 1: "Recognize and protect major views in the City, with particular attention to those of open space and water." (p. 10)

The project site is outside the City's major designated view corridors (California and Pine Sts.) and would not obstruct any scenic views now available to the public.

2. Policy 3: "Recognize that buildings when seen together, produce a total effect that characterizes the city and its districts." (p. 10)

The project would represent an extension of high-rise development into an area of small-scale warehouse and commercial buildings, as do the Ecker St. building nearing completion, and the proposed 49 Stevenson St. and Lincoln Plaza proposals.

B. Policies for Conservation

3. Policy 4: "Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development." (p. 25)

The project would require demolition of 2 buildings both of which were rated "C" in the Heritage Survey.

4. Policy 6: "Respect the character of older development nearby in the design of new buildings." (p. 25)

The project would represent a departure in form and scale from neighboring older development. The building facade materials would be glass and metal. Older buildings (pre 1950s) are generally brick, concrete or faced in terra cotta. Post 1950s development (facing the site across Stevenson St.) is more comparable to the project in scale and quality of surface materials.



TABLE 3: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE SAN FRANCISCO COMPREHENSIVE PLAN\* AND THE PROPOSED PROJECT (Continued)

C. Policies for Major New Development

5. Policy 1: "Promote harmony in the visual relationships and transitions between newer and older buildings." (p. 36)

See Item 4 above. Older buildings on either side of the site are of differing heights and architectural styles. The project would be set back from these older buildings to provide a visual separation; the height of the pedestrian arcade would be related to cornice lines of these buildings.

6. Policy 2: "Avoid extreme contrast in color, shape and other characteristics which stand out in excess of their public importance." (p. 36)

The project would be an irregular form having the appearance of 2 towers, off-set from each other, with curved corners at opposite ends. The glass would be tinted grey and the metal panels would be of light to medium values. These values would change depending on time of day, natural lighting conditions and reflected sky colors. In the context of neighboring box-like structures, the project would appear distinctive, but not "extreme" in the meaning of the Policy.

7. Policy 5: "Relate the heights of buildings to important attributes of the City pattern and to the height and character of existing development." (p. 36)

See Item 2 above. The project would be taller than neighboring low-rise and mid-rise development (see Figure 8, p. 18). The building height would form part of the stepping in scale from high-rise development in the center of downtown and on the project block (35-story 595 Market St. building, 39- and 22-story Chevron buildings, and the 38-story Tishman building) to lower-scaled development south of the site (including the 18-story Ecker Sq. building, the 5-story Golden Gate University buildings). The project height of 324 ft. would be 376 ft. below the permitted 700-ft. maximum height.

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TABLE 3: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE SAN FRANCISCO COMPREHENSIVE PLAN\* AND THE PROPOSED PROJECT (continued)

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- |   |   |
|---|---|
| <p>● 8. Policy 6: "Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction." (p. 37).</p> | <p>The bulk of the project would be similar in scale and massing to nearby new development. The curved portions of the building would have the effect of reducing the apparent size of the building. The horizontal dimensions of the project would exceed those of most other buildings in the interior and on the southern portions of the block.</p>   |
| <p>D. <u>Policies for Neighborhood Environment</u></p>  |   |
| <p>● 9. Policy 13: "Improve pedestrian areas by providing human scale and interest." (p. 57)</p>  | <p>The project would provide visual interest at the street level via the curved, covered pedestrian arcade. Street trees and decorative pavement would be installed, with plazas situated around the building. Pedestrian access through the site would be provided by these plazas. The sponsor would be willing to place and maintain decorative pavement on the driveway of the City-owned building on the west side of the site. The project, while contributing to the change in scale of both Stevenson and Jessie Sts., would add to the visual interest at street level by creating retail uses, and a pedestrian arcade.</p> |

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\* Department of City Planning, 1971, Urban Design Element of the Comprehensive Plan. Page references are shown in parentheses.

SOURCE: Environmental Science Associates, Inc.

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### Project Visibility

Generally, the project would not be highly visible in short-range views from the west and east because of its location behind taller development on the northern section of the project block. The upper portion of the building would be visible in short-range views from south of Market St., particularly along Mission St. between First and New Montgomery Sts. The project would be visible in short-range views from Sansome St. It would fill in the existing open vista between the two Chevron Towers (see Figure 16, p. 52).

In long-range views, the project would join a group of high-rise buildings which make up the Financial District skyline. The project would be visible from southerly views as development south of the site consists of low- and mid-rise buildings (see Figure 17, p. 53). The project would not be highly visible from northerly, westerly and easterly views as most of the structure would be obstructed by existing high-rise development; only portions of the northwest side of the building would be visible.

The project would not obstruct any scenic views or vistas now available to the public. Most views from nearby buildings would not be affected because of existing and approved taller developments. Some views from the south sides of the Tishman building, the Standard Oil buildings and the building at 595 Market St. would be obstructed below the 23rd floor. Views from the north sides of mid-rise buildings located south of the project site are already obstructed by existing high-rise development along Market St.

### Shadows

Project shadows were analyzed for four times of the year for the hours of 10:00 a.m. to 2:00 p.m. Included in this report are graphic representations of project shadows which would affect either the Chevron Garden Plaza or the Tishman Plaza. When shadows would not reach either of these plazas during the hours or times of year analyzed, graphics are not included in the report but are available for public review at the Department of City Planning, Office of





SOURCE: Gensler & Associates, Architects

● FIGURE 16: View of Project  
from Sansome St.





▲ 595 Market St.

▲ Chevron Bldg.

▲ Project

▲ 525 Market St.

▲ Ecker Square

SOURCE : Genster & Associates, Architects and  
Environmental Science Associates, Inc.

● FIGURE 17: View of the Project from the South



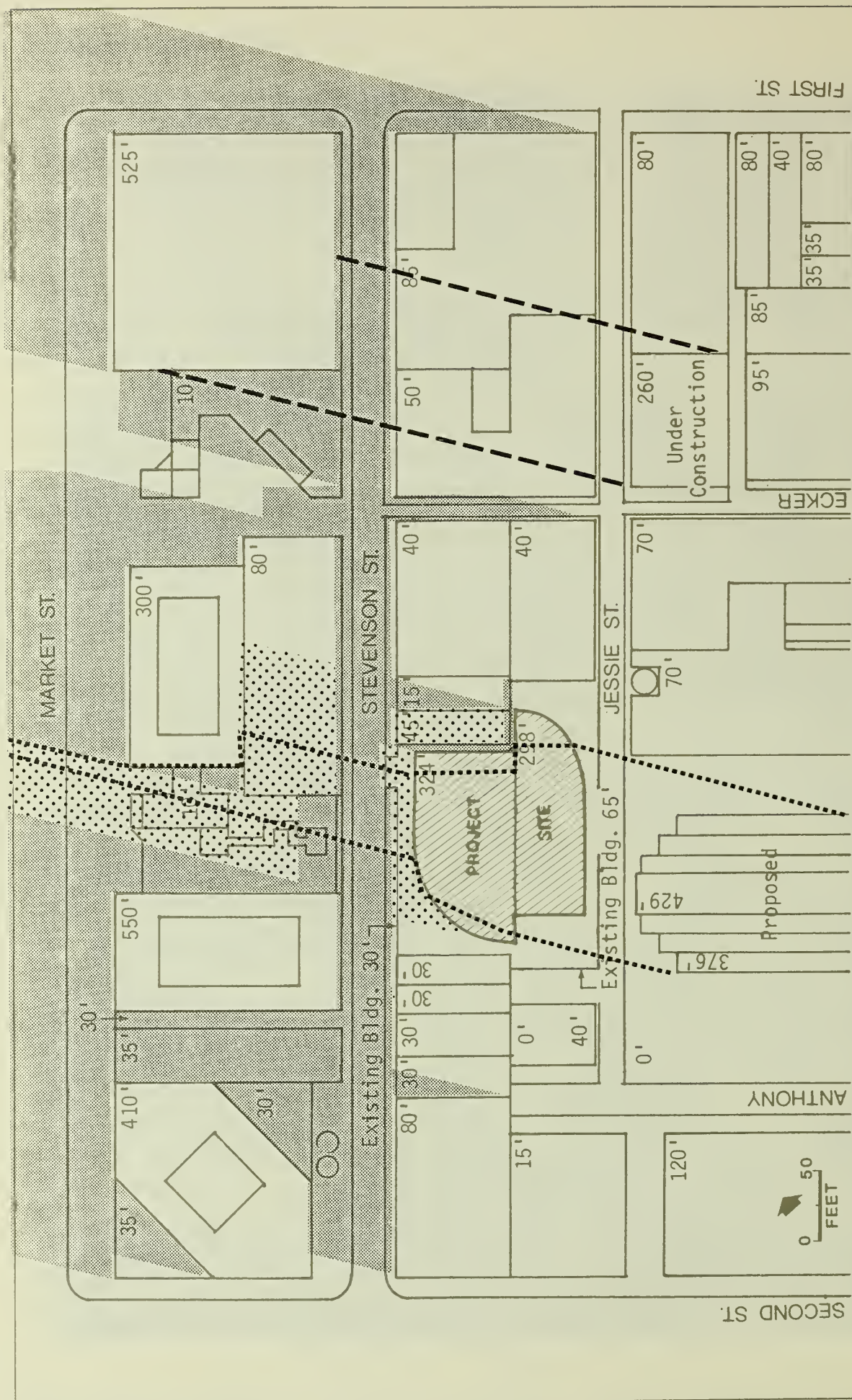
#### IV. Environmental Impact

Environmental Review, 450 McAllister St., Fifth Floor, San Francisco. In addition to project shadows, shadows from existing buildings (including those on the project site), from the Ecker Square Building now under construction east of the site, and from the One Anthony Court Building proposed south of the site are also presented.

The project would cast new shadows on the Chevron Garden Plaza, across Stevenson St. from the site, and the Tishman Plaza, north of the site at the terminus of Ecker St. The impact is limited primarily to adding to the existing shadows cast by other high-rise building in the adjacent areas. The proposed One Anthony Ct. Building would be taller than the project; it would shade the project site, Chevron Garden Plaza and Tishman Plaza. Its shadow would be most elongated during winter afternoons, affecting Tishman Plaza. From spring to fall during mid-morning hours, its shadow would affect primarily the project plaza and surrounding streets. Figures 18-29 provide a projected visualization of shadows that would be cast by the project. The narrative below describes each of these impacts as they appear in the respective figures. June and September hours are Daylight Savings Time (DST).

In December, shadows are cast from the north-northwest direction to a north-northeast direction. At 10:00 a.m. (see Figure 18, p. 55), the project casts a shadow on the central portion of the Chevron Garden Plaza and on the western half of the 80-ft. portion of the Chevron Building. A portion of the Market St. sidewalk fronting the Chevron Garden Plaza would also be shaded. It should be noted that during the winter, the existing buildings on the site shade a small southern portion of the Chevron Garden Plaza (which is planted with flowers); however, this existing shadow slowly retreats during the latter part of day so that after 12 noon, the existing buildings' shadow would not be cast on the Chevron Garden Plaza. At 11:00 a.m. (see Figure 19, p. 56), the project would shade a greater portion (about 80%) on the 80-ft. portion of the Chevron Building, and about 20% of the Chevron Garden Plaza. At 12 noon (see Figure 20, p. 57), the shadow of the project would be cast northward over most of the 80-ft. portion of the Chevron Building, a minor portion of the elevated Tishman Plaza, along Market St. and on the rooftops of two adjacent four-story buildings northwest of the project. The shadow cast by the proposed One Anthony Court Building in December at noon time would shade the entire Tishman

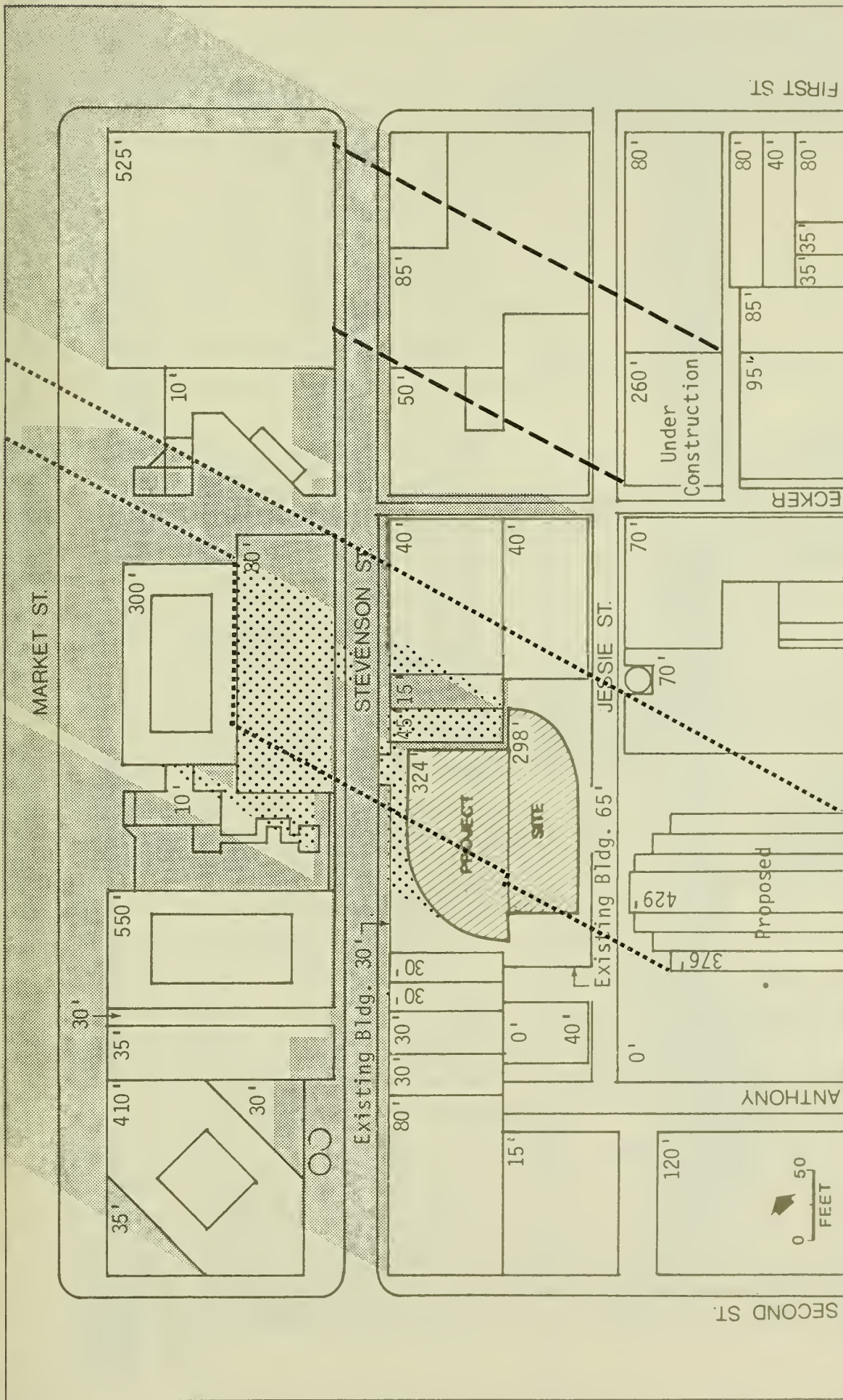




● FIGURE 18: Shadow Patterns -  
December 10 A.M.

BASE MAP SOURCE: Gensler and Associates, Architects  
SHADOW INFORMATION: Environmental Science Associates, Inc.





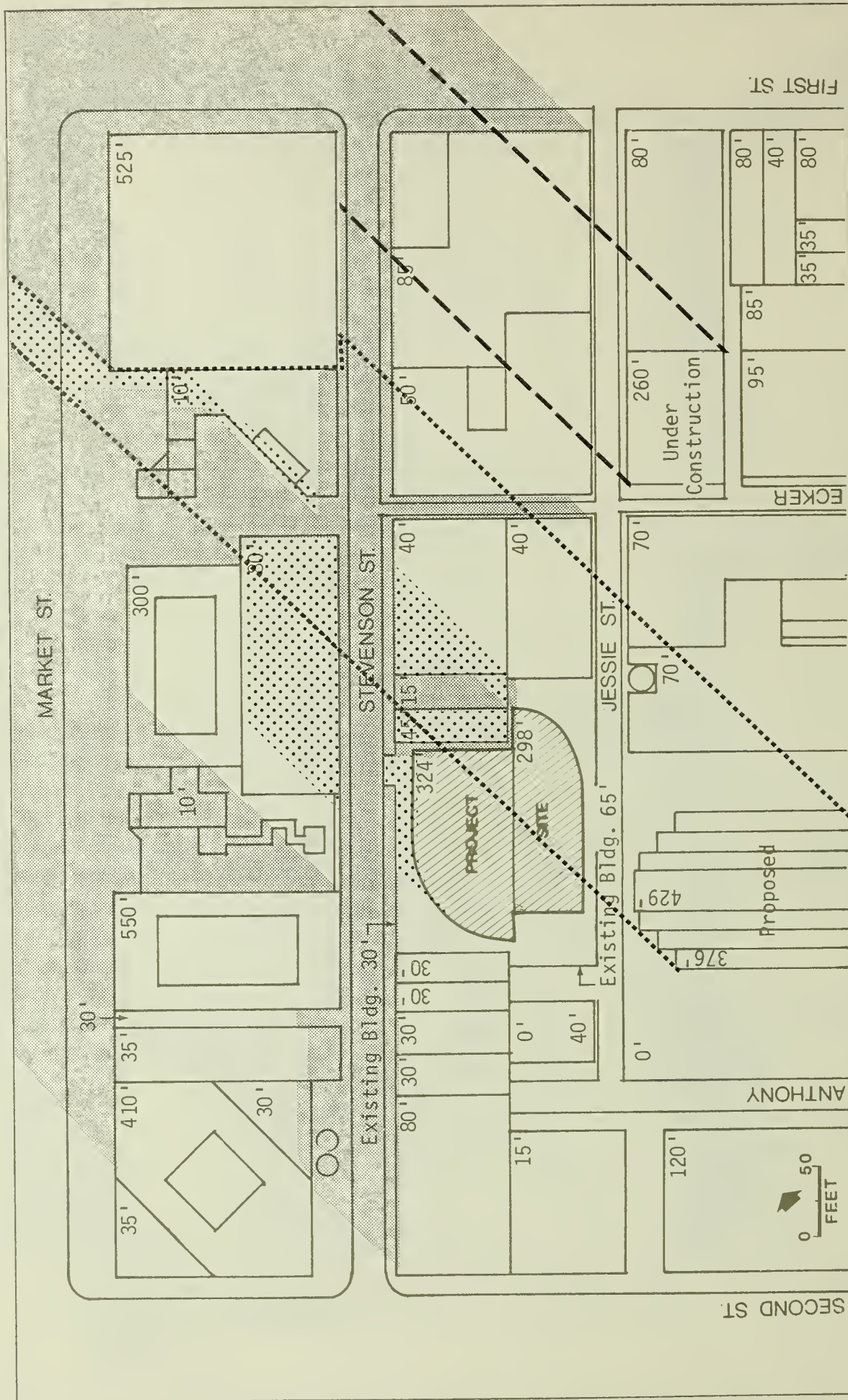
# LEGEND

- Existing Shadow
- Project Shadow
- Ecker Square Bldg. Shadow
- One Anthony Court Shadow

● FIGURE 19: Shadow Patterns -  
December 11 A.M.

BASE MAP SOURCE: Gensler and Associates, Architects  
SHADOW INFORMATION: Environmental Science Associates, Inc.







#### IV. Environmental Impact

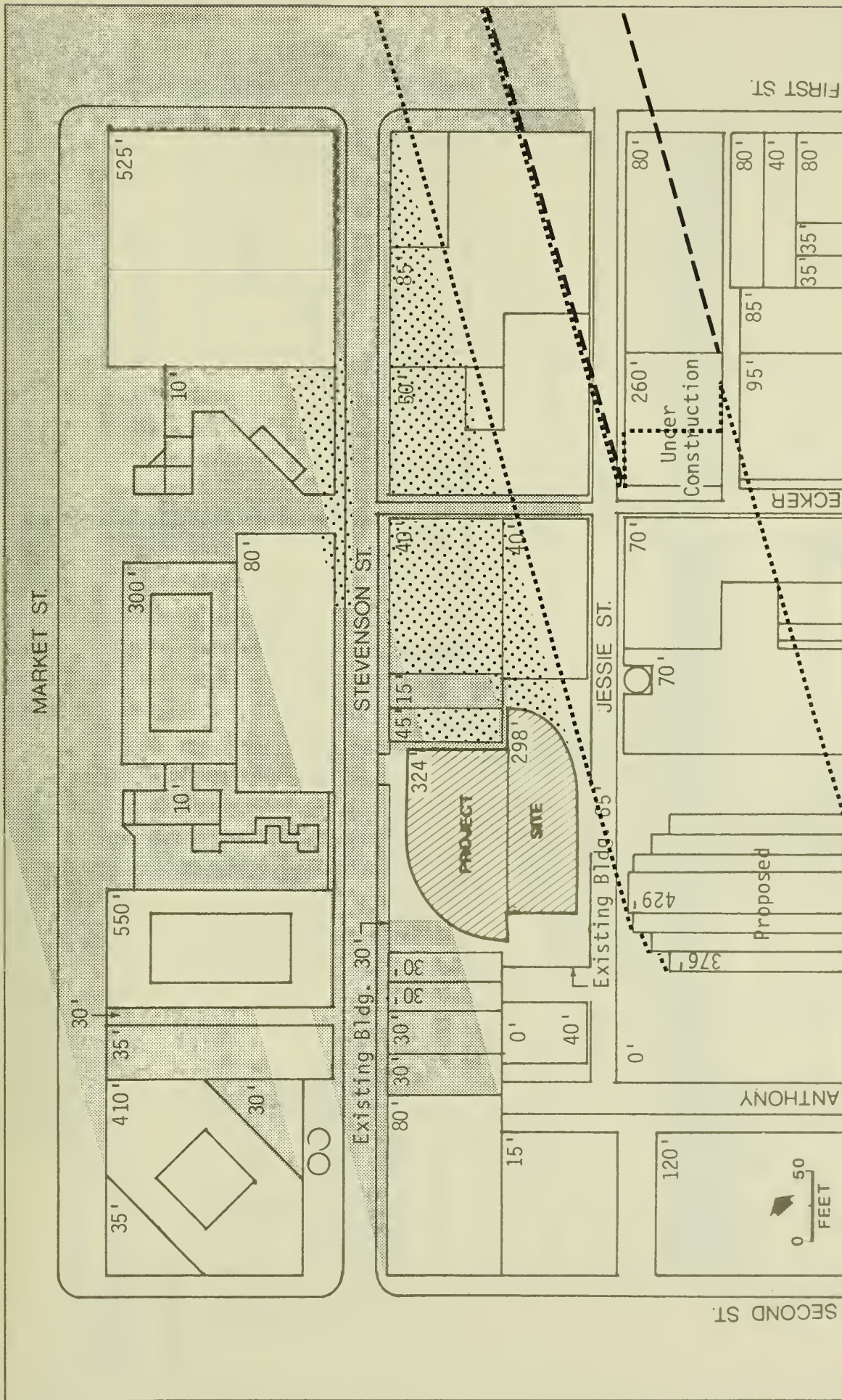
Plaza area (both the elevated and non-elevated portions). At 1:00 p.m. (see Figure 21, p. 58), the project would cast a shadow north-northeast so that the northern half of the 80-ft. portion of the Chevron Building would be shaded, along with 20% of the southern end of Tishman Plaza (elevated portion), and the rooftops of two four-story buildings adjacent to the site. The longest shadow would be cast at 2:00 p.m. (see Figure 22, p. 59). At this time, a small portion of the Tishman Plaza (elevated portion) and the Stevenson St. sidewalk fronting the Tishman Plaza would be in shadow; the shadow would fall primarily on the rooftops of buildings northeast of the site.

The March/September shadow moves from morning to afternoon in a north-westerly to easterly direction. At 10:00 a.m./11:00 a.m. (see Figure 23, p. 61) in March/September (DST in September), the project would shade the entire Chevron Garden Plaza and the sidewalk fronting the Plaza. At 11:00 a.m./12 noon (March/ September), the project would shade the eastern half of the Chevron Garden Plaza (see Figure 24, p. 62). At 12 noon/1:00 p.m. (see Figure 25, p. 63), the project would cast a shadow on about 85% of the 80-ft. portion of the Chevron Building, a very small strip of the Tishman Plaza, and the rooftops of three adjacent buildings. In March/ September at 1:00 p.m./2:00 p.m. (see Figure 26, p. 64), the project would shade all or a portion of four adjacent low-rise buildings east of the site, a portion of the 80-ft. Chevron Building, and 10% of the elevated Tishman Plaza.

The building's shadow during summer would have the least impact on surrounding buildings and plazas because of the position and elevation of the sun. Shadows move from north-northwest to east, morning to afternoon. At 10:00 a.m. in June (DST) the project would shade the 30-ft. portion of the 595 Market St. building, the southern third of the Stacey's Bookstore building (35 ft. high), and the southern corner of the Chevron Garden Plaza (see Figure 27, p. 65). The rooftops of the three adjacent buildings on Stevenson St. west of the site would also be wholly or partially shaded. In June at 11:00 a.m. (see Figure 28, p. 66), the project would shade a small portion of the rooftop of Stacey's Bookstore and about 60% of the Chevron Garden Plaza. At noon, the project would shade about 40% of the Chevron Garden Plaza, a portion of Chevron's 80-ft. building and the rooftop of the adjacent 45-ft. building on Stevenson St. east of the project site (see Figure 29, p. 67). After noon,







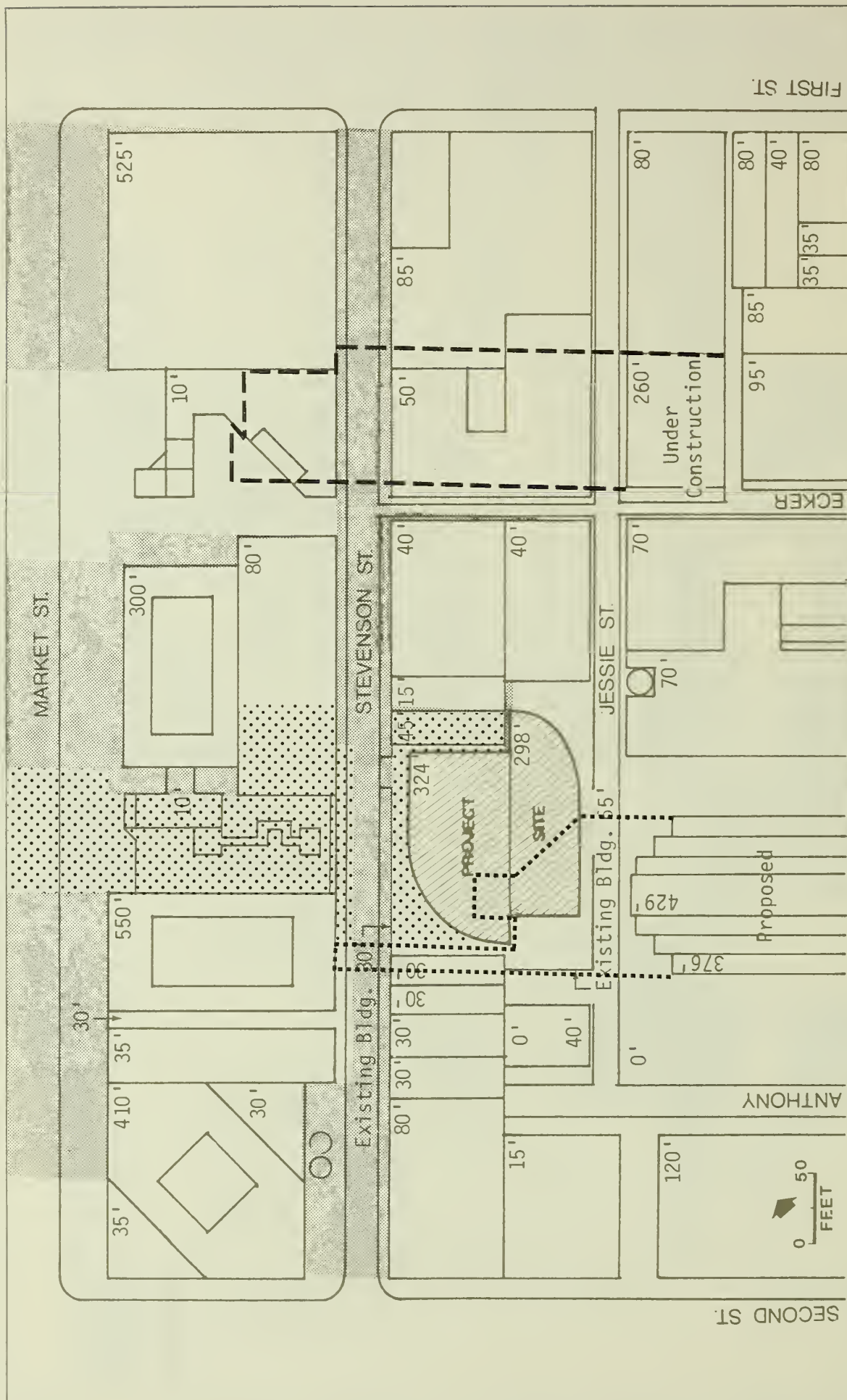
# LEGEND

- Existing Shadow
- Project Shadow
- Ecker Square Bldg. Shadow
- One Anthony Court Shadow

● FIGURE 22: Shadow Patterns -  
December 2 P.M.

BASE MAP SOURCE: Gensler and Associates, Architects  
SHADOW INFORMATION: Environmental Science Associates, Inc.



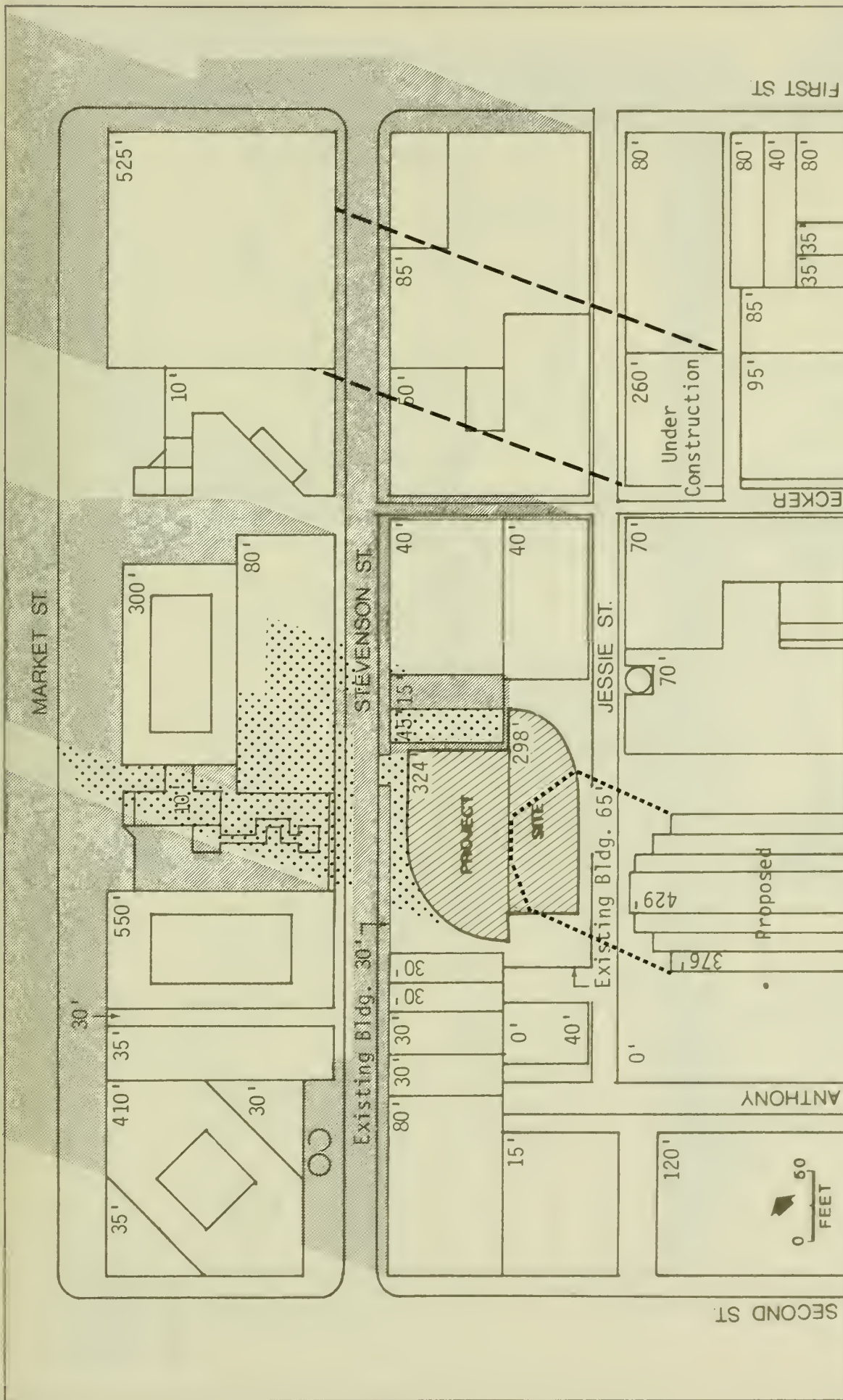


● FIGURE 23: Shadow Patterns -

March/September 10 A.M./11 A.M.

**BASE MAP SOURCE:** Gensler and Associates, Architects  
**SHADOW INFORMATION:** Environmental Science Associates, Inc.





# LEGEND



Existing Shadow

Project Shadow

--- Ecker Square Bldg. Shadow

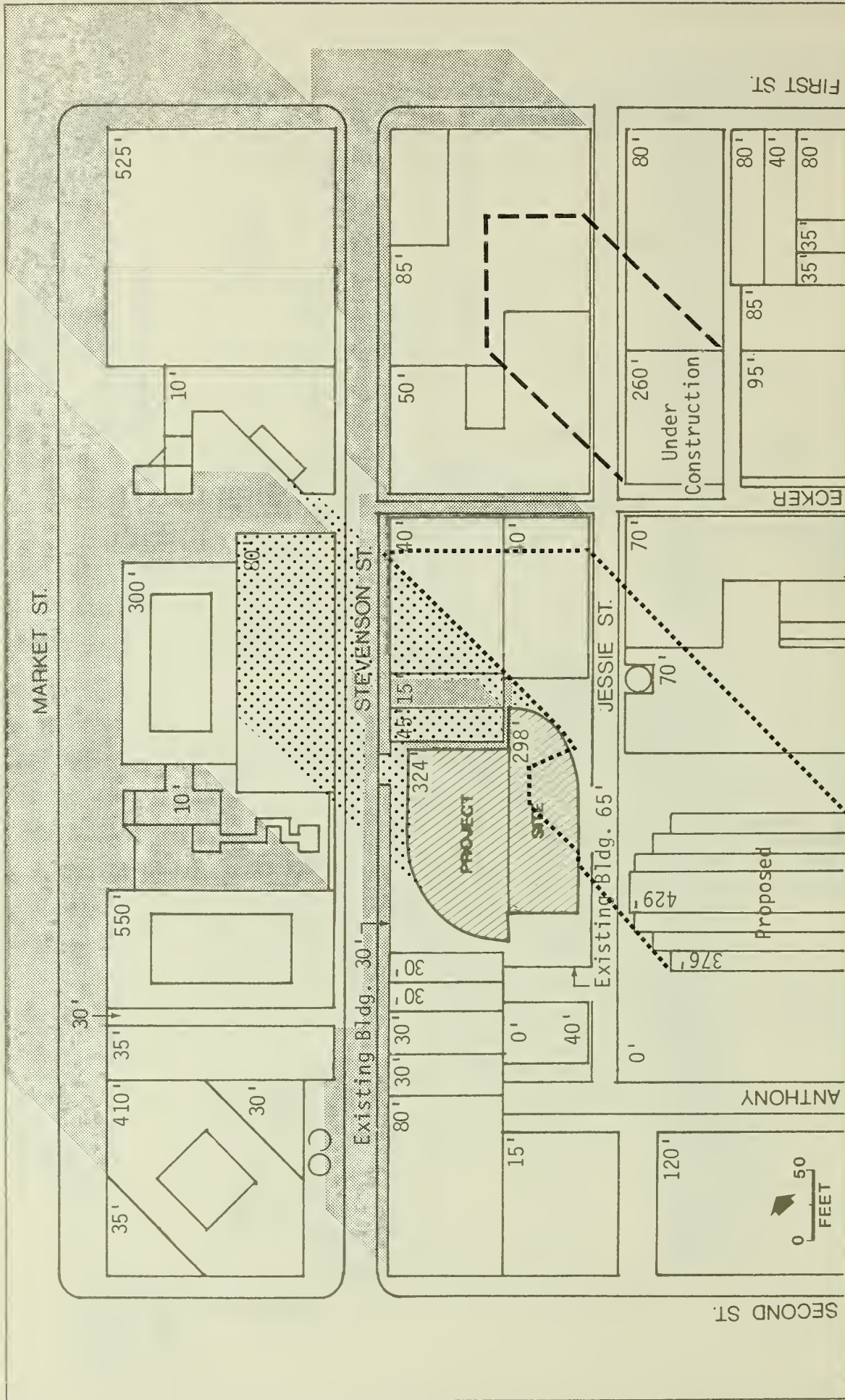
..... One Anthony Court Shadow

## ● FIGURE 24: Shadow Patterns -

March/September 11 A.M./Noon

BASE MAP SOURCE: Gensler and Associates, Architects  
SHADOW INFORMATION: Environmental Science Associates, Inc.





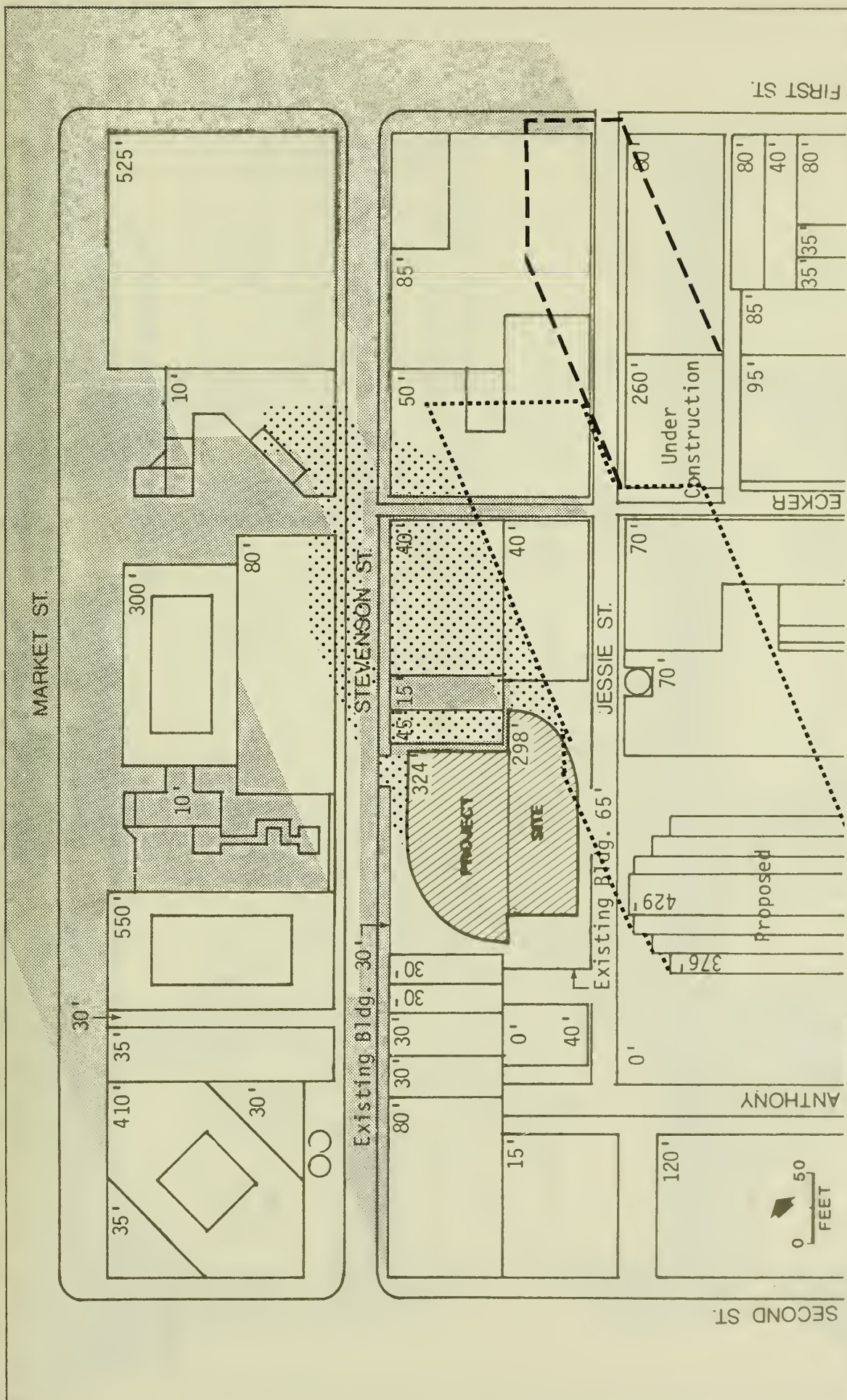
# LEGEND

- Existing Shadow
- Project Shadow
- Ecker Square Bldg. Shadow
- One Anthony Court Shadow

● FIGURE 25: Shadow Patterns -  
March/September Noon/1 P.M.

BASE MAP SOURCE: Gensler and Associates, Architects  
SHADOW INFORMATION: Environmental Science Associates, Inc.





## LEGEND

## Existing Shadow

Project Shadow

----- Ecker Square Bldg. Shadow

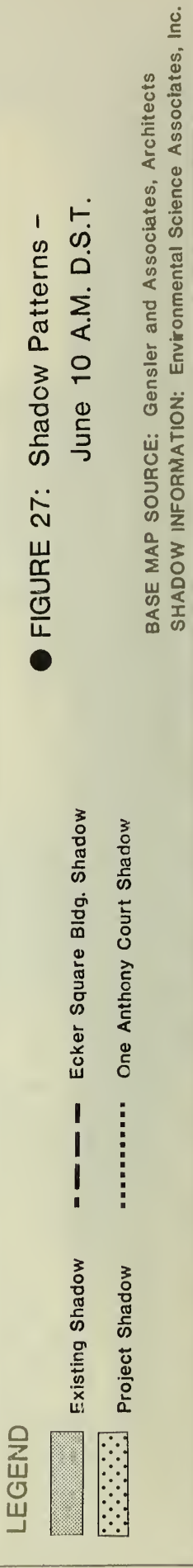
..... One Anthony Court Shadow

● FIGURE 26: Shadow Patterns -

March/September 1 P.M./2 P.M.

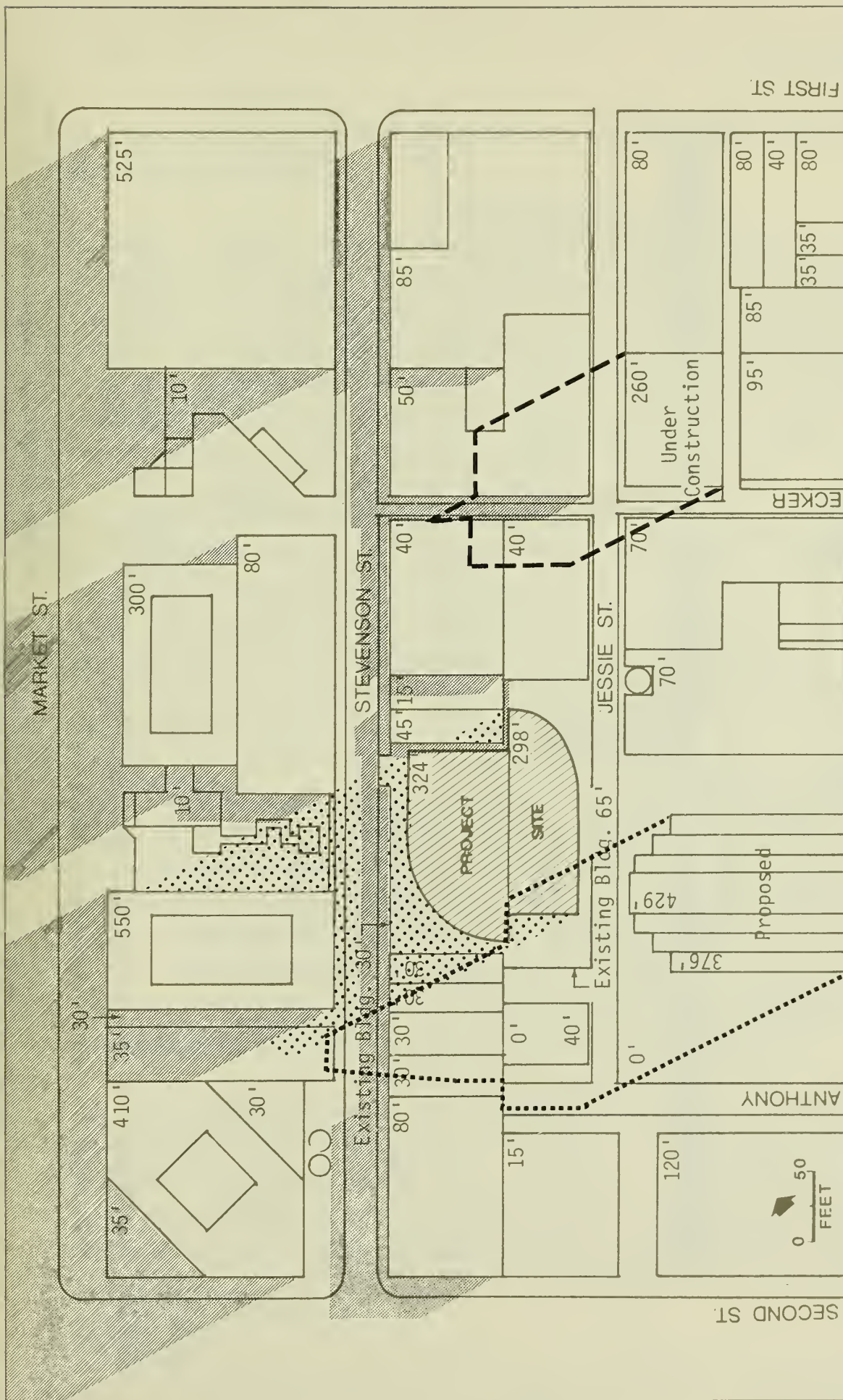
**BASE MAP SOURCE:** Gensler and Associates, Architects  
**SHADOW INFORMATION:** Environmental Science Associates, Inc.





**BASE MAP SOURCE:** Gensler and Associates, Architects  
**SHADOW INFORMATION:** Environmental Science Associates, Inc.



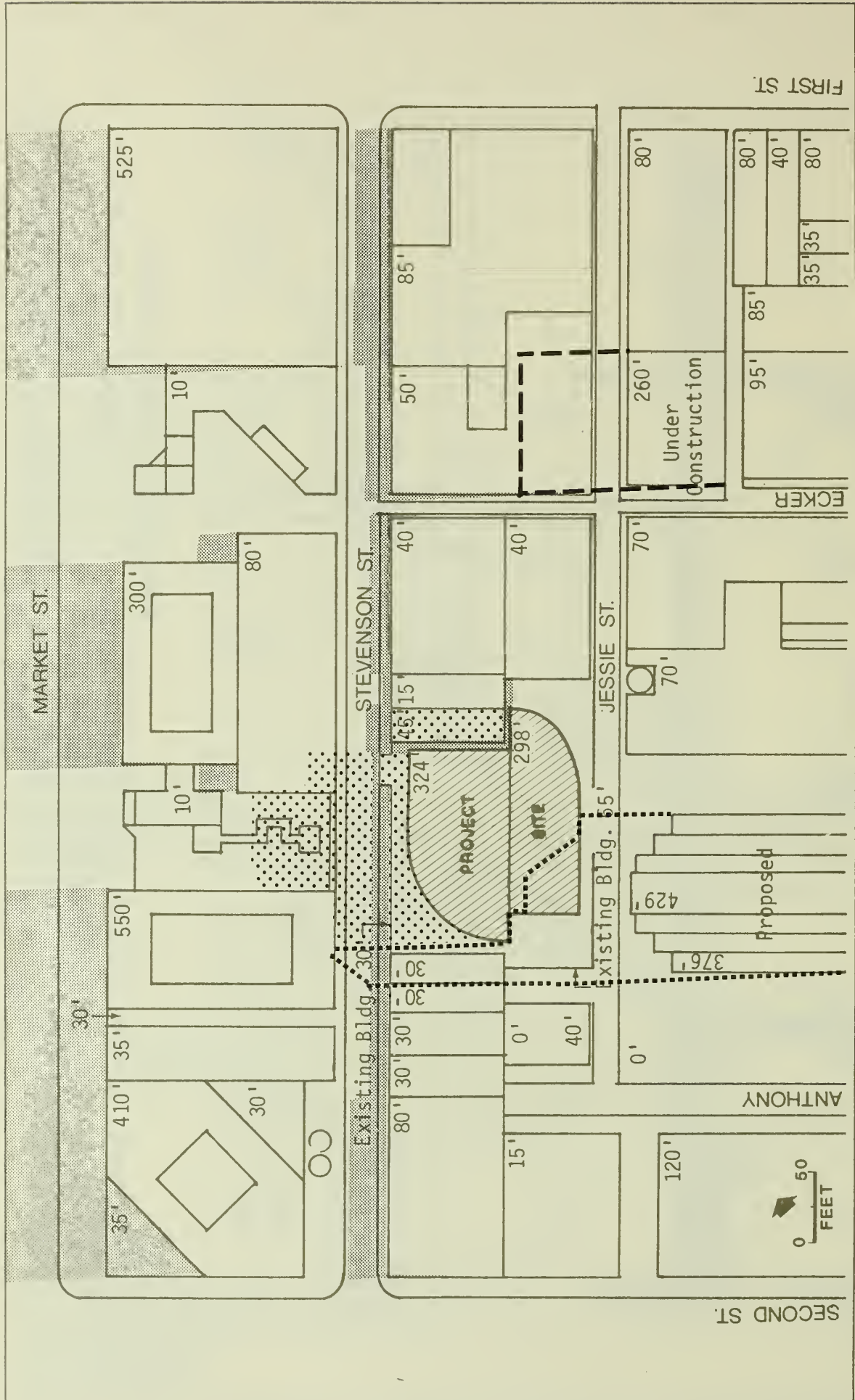


# LEGEND

- Existing Shadow
- Project Shadow
- Ecker Square Bldg. Shadow
- One Anthony Court Shadow

● FIGURE 28: Shadow Patterns -  
June 11 A.M. D.S.T.

BASE MAP SOURCE: Gensler and Associates, Architects  
SHADOW INFORMATION: Environmental Science Associates, Inc.



**LEGEND**

-  Existing Shadow
-  Project Shadow
-  Ecker Square Bldg. Shadow
-  One Anthony Court Shadow

● **FIGURE 29: Shadow Patterns -**  
**June Noon D.S.T.**

BASE MAP SOURCE: Genaler and Associates, Architects  
 SHADOW INFORMATION: Environmental Science Associates, Inc.



#### IV. Environmental Impact

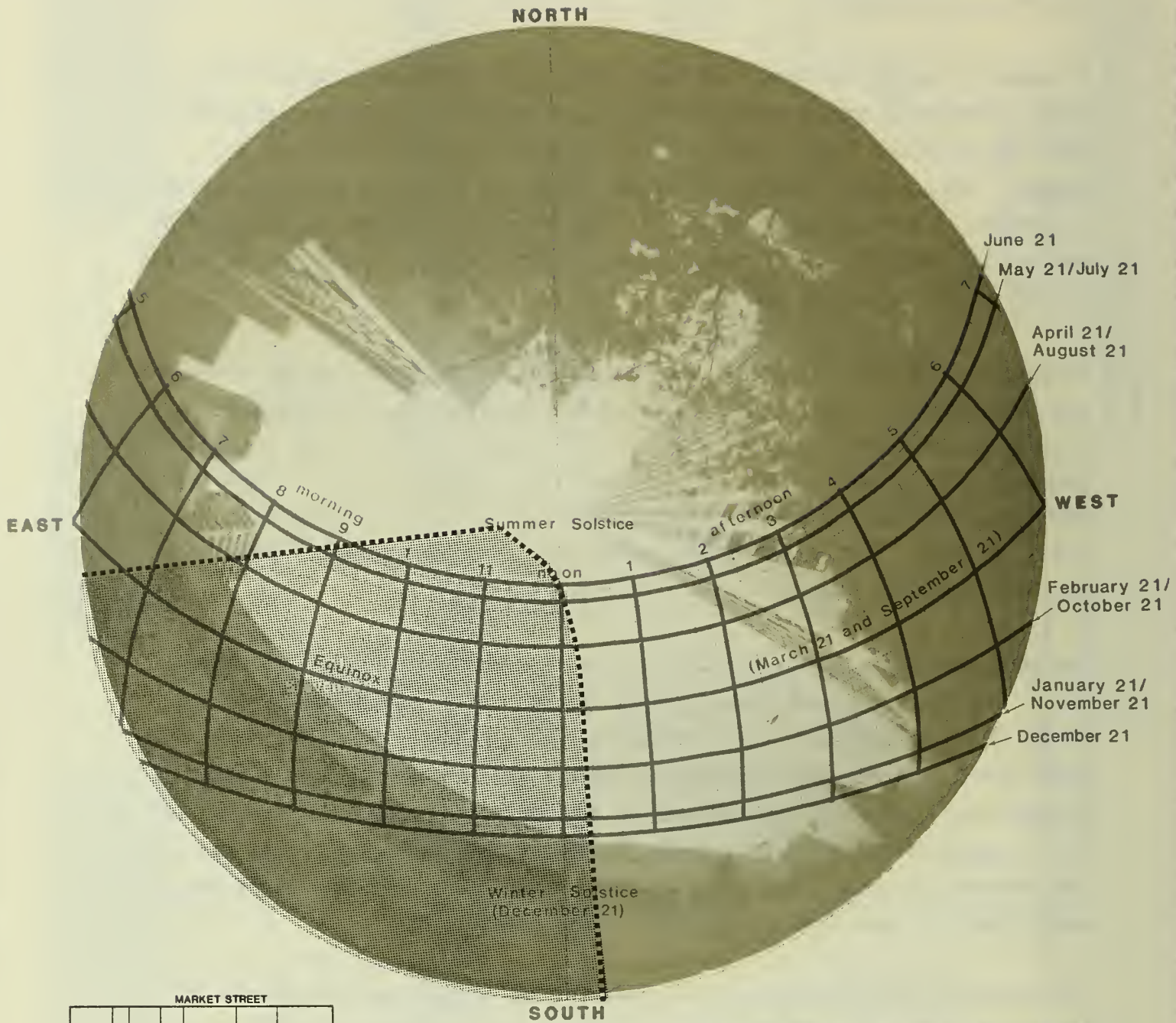
the project would not shade nearby plazas, but would shade roofs of adjacent buildings to the east.

In summary, the project would cast new shadows on the Chevron Garden Plaza in winter (morning), spring and fall (morning, noontime), and summer (noontime). The rooftop of the 80-ft. portion of the Chevron Building would also be shaded. The southern portion of Tishman Plaza would also be affected during afternoons in winter, spring and fall. Other areas that would be affected by new project shadow would be the rooftops of the immediately adjacent buildings and the buildings on the same block fronting Ecker St.

Figures 30-32 depict the project in relationship to the sun throughout the day and throughout the year. The photograph from location no. 1 (on Stevenson St. between the project site and the Chevron buildings; see Figure 30, p. 69) shows that the project would intercept morning sunlight to this location all year beginning about 8 a.m. from August through April, and beginning about 9 a.m. in June. The project would remain in the sun's path until about noon all throughout the year.

The photograph from location no. 2, at the Chevron Garden Plaza (see Figure 31, p. 70) shows that the project would intercept sunlight primarily in the months October through February during the hours from 8 a.m. or 9 a.m. to about 11:30. In the months August to October and February to April, the project would intercept sunlight during the hours from about 9:30 a.m. or 10 a.m. to about 11:30 a.m. From April to May and July to August, light would be intercepted for about a half hour period around 11 a.m. Minimal light loss would occur in June from the project at this point.

The photograph from location no. 3, south of the project site on Jessie St. near Anthony Pl. (see Figure 32, p. 71) shows that the project would not be in the direct path of the sun. The One Anthony Ct. building would intercept sunlight at this point primarily during the mid-morning hours (10 a.m. to about 10:30 to 11:30 a.m.) during the months of March through August.



SOLAR TIME (Daylight Savings Time from late April through late October would be one hour later)

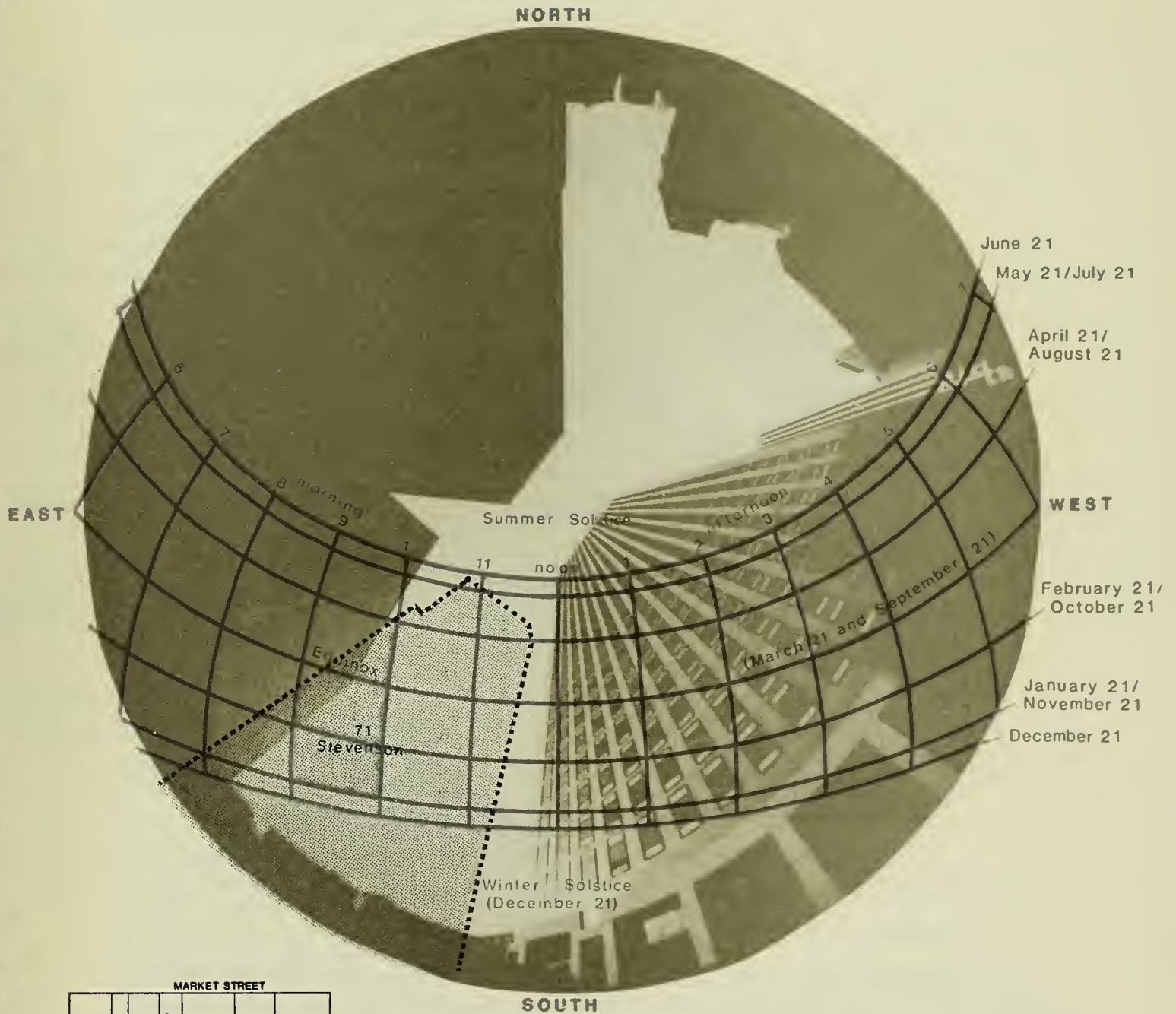
 Outline of Project

• Location of Photo

**FIGURE 30: Sun Path Analysis  
Location #1**

SOURCE: Donald Ballanti

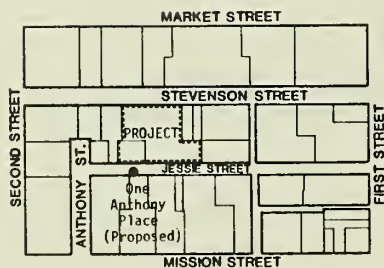
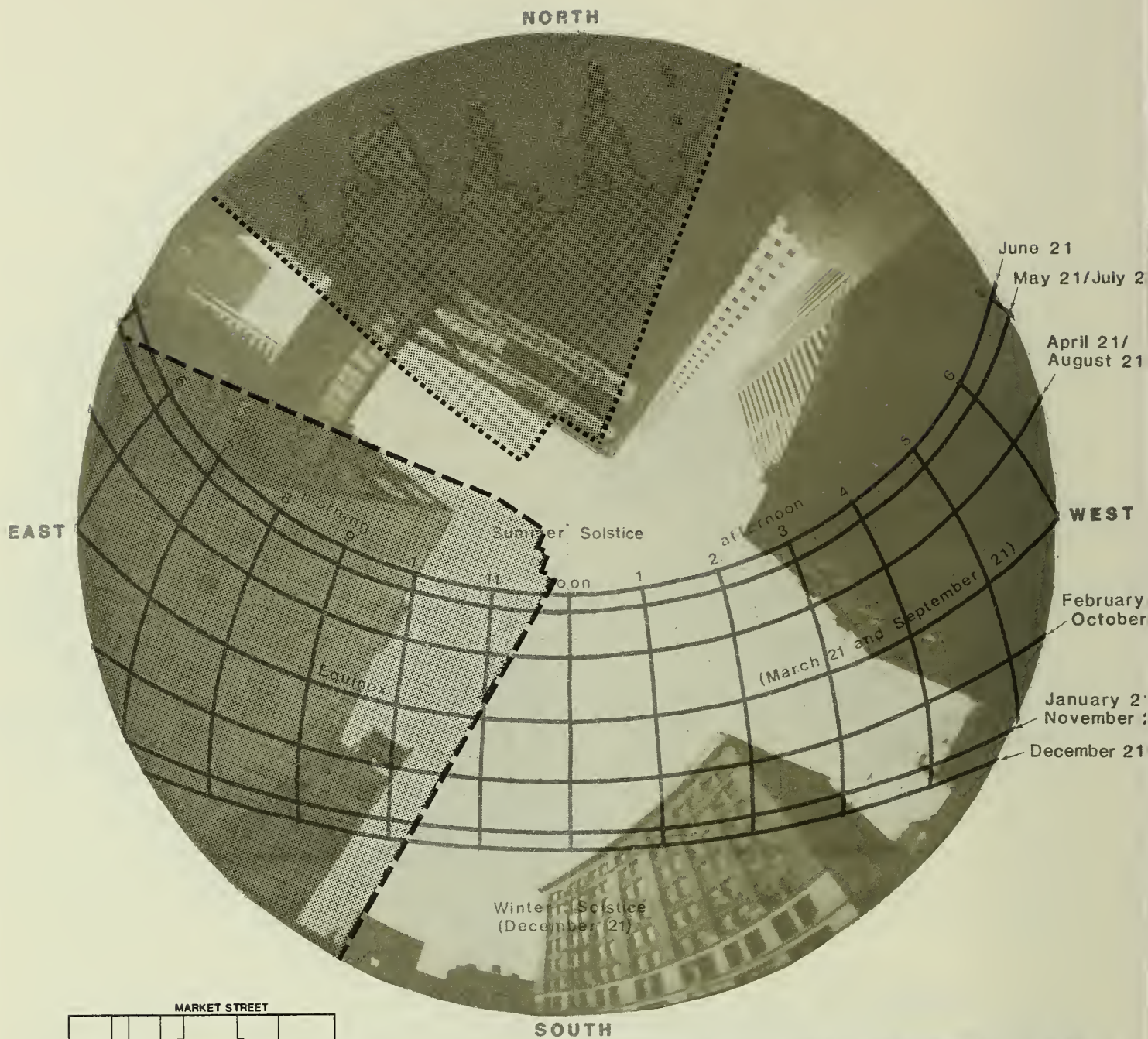




• Location of Photo

SOURCE: Donald Ballanti

FIGURE 31: Sun Path Analysis  
Location #2



• Location of Photo

SOURCE: Donald Ballanti

SOLAR TIME (Daylight Savings Time from late April through late October would be one hour later)



Outline of Project



Outline of One Anthony Place (Proposed)

FIGURE 32: Sun Path Analysis  
Location #3



B. EMPLOYMENT, HOUSING AND FISCAL FACTORSDirect Project-Related Employment

A projected 1,325 permanent full-time jobs would be accommodated by the project. Although no tenants are secured at this time, prospective tenants are anticipated to be accounting firms, corporate executives, and financial related services. Because specific tenants are unknown at this time, the projected total number of employees was derived by assuming an average number of sq. ft. per employee, by employment type (see Table 4). The net increase in employment at the site, after subtracting the five existing jobs that would relocate from the site, would be about 1,320.

TABLE 4: PROJECTED PERMANENT EMPLOYMENT AT THE PROJECT SITE

<u>Employment Type</u>	<u>Building Space (Gross Sq. Ft.)</u>	<u>Space Per Employee (Sq. Ft.)</u>	<u>Projected Number of Employees*</u>
Office	324,640	250 **	1,300
Retail	1,640	400 ***	5
Building Maintenance	360,500	20,000 +	20
TOTAL EMPLOYMENT			1,325
TOTAL EXISTING EMPLOYMENT			5
NET INCREASE ON SITE			1,320

\* All numbers are rounded to the nearest five employees.

\*\* San Francisco Department of City Planning, "Office Housing Production Program - Interim Guidelines," January 1982.

\*\*\* California Office of Planning and Research, January 1978, Economic Practices Manual, pp. 35-37.

+ Highrise buildings generally employ one janitor per 30,000 gross sq. ft. (Roger Dillon, Secretary-Treasurer, Building Services Employees Union, Local 87, telephone communication, April 17, 1980). The 20,000 sq. ft. per maintenance employee figure includes additional service personnel, such as security guards, building engineers and window washers.

SOURCE: Environmental Science Associates, Inc.

### Indirect (Secondary) Employment

Secondary employment and income would result from permanent project employment; through the multiplier effect, each employed person would generate additional employment through expenditure for goods and services. Assuming that the new jobs accommodated by the project would be primarily in finance, insurance, and real estate (the so-called FIRE sector), about 1,560 additional jobs in other sectors of the Bay Area economy would result from the growth of FIRE businesses. The total number of Bay Area jobs that would be supported by growth in downtown employment due to the project would be about 2,900 (the 1,325 project jobs plus the 1,560 jobs induced by the multiplier effect)./1/

The project would require about 125 person-years of construction labor throughout the 23-month construction period. About 195 additional person-years of employment would be generated in the Bay Area as a result of the multiplier effect of project construction./1/

### HOUSING

#### Citywide Housing Requirements

The project could result in an increase in downtown employment of about 1,320 net new jobs, and 1,325 gross new jobs. The Office Housing Production Program (OHPP) formula for calculating housing demand caused by downtown office projects assumes that 40% of (gross) new office workers would move to San Francisco and that 1.8 office workers would occupy each household./2/ Based on this formula, the project would result in 519 new San Francisco residents from office employment; required housing would be 289 housing units (based on 324,640 gross sq. ft. of office space, excluding the ground floor with retail and lobby areas). This formula represents the basis for the City Planning Commission's policy of requiring housing to offset demand created by office developments. Another formula, recognized by the City, projects that between 15% and 30% of the new employees would be expected to move to San Francisco./3/ Based on total new on-site office employment (not retail or janitorial), the project would generate 195 to 390 new San Francisco



#### IV. Environmental Impact

residents. On the assumption of 1.4 persons per household,<sup>3/</sup> the project would generate a demand about 140 to 280 housing units.

On January 27, 1982, the project sponsor entered into an agreement with the City and County of San Francisco to provide housing units or the equivalent (under the OHPP guidelines) for 265 of the 289 units, according to the OHPP formula, which would be required by City Planning Commission policy for the project as a condition of project approval. The project sponsor would make other arrangements to provide the additional 24 units or the equivalent under the OHPP Guidelines.

##### Housing Affordability

● A substantiated analysis of housing affordability would require, first, determination of the number of households generated by the project preferring to live in San Francisco. This figure, in turn, would be related to net employment increase and residence location preference. As new office space would be primarily occupied by existing San Francisco businesses that would relocate, most new workers would be already employed in San Francisco.<sup>4/</sup> Those project workers transferring from another place of employment within the City would not generate housing demand directly attributable to the project; thus, projections of housing demand attributable to the project must subtract workers already employed in San Francisco.

● New employment growth due to the project would occur as new jobs were accommodated in older buildings that would be vacated by project employees. As tenants for the project are not known, it is impossible to predict which buildings would be vacated for the project (and which buildings would be then vacated to fill the former level of vacated space, and so on). Employee movements are dynamic; all employees new to the City attributable to the project would not be directly employed within the project. For the above reasons, it is not possible to precisely quantify new employees due to the project.

The projected regional distribution of project employees is contained in Appendix C, Table C-1, p. 407. Where an employee would live is the result of individual decision-making. Such decisions are a function of location

#### IV. Environmental Impact

preference and housing economics. Information concerning housing preferences would be obtainable through surveys of new office workers. Preference information is complex, involving many factors such as number of bedrooms, type of neighborhood, family composition, and commute distance to work.

Assuming that the number of new employees and their preferences for housing were known, the most critical variable affecting the housing affordability analysis would be a new household's ability to pay for housing. The salary of new workers alone is insufficient to determine housing affordability; the total income of all members of a new worker's household must be known. A variety of published sources give salaries for various occupational categories, but no comprehensive data regarding the distribution of household income among office workers (or any other group of workers) exists. Citywide household income estimates based on the 1980 Census will become available during 1983, but this data source will not reflect household income of downtown office workers.

The ratio of housing expenses to income, according to the "Office Housing Production Program (OHPP) Interim Guidelines", January 1982, are 30% of household income for rental expenses and 38% of household income for home ownership expenses. The down payment for home ownership may be assumed to be between 10% and 20% of purchase cost; however, a household's ability to afford a down payment would depend on household assets and liabilities, and would vary widely for different households. Assumptions regarding mortgage interest rates must also be made. Considering the volatility of interest rates in recent years, an affordability analysis based on current market interest rates might not be relevant when the project is completed and occupied.

Quantification of project impacts on the housing market is not possible based on available published information. A study of the "Feasibility of Performing a Housing Affordability Analysis" by Questor Associates (June 15, 1982) concludes that household income of project employees, distribution of housing demand, and magnitude of new demand can only be accurately determined by surveying occupants of buildings comparable to an office project. The study states that without such detailed information, "it is not feasible to quantify



with reasonable accuracy the housing affordability parameters associated with new office construction."/4/

Based on available data, an approximation of a housing affordability analysis appears in Appendix C, Table C-2, p. 409. Data in the table rely upon published sources of office worker incomes (not household income), and prices of housing (without regard to housing availability). Assumptions are made regarding ratio of housing expenses to income, mortgage interest rates, and down payments. Analysis based on these data and assumptions indicates that most project employees would not be able to afford ownership housing in San Francisco, although a significant minority, depending on the number of workers per household, would be able to do so. Most project employees, except the lowest-paid clerical employees desiring to live alone, would be able to afford rental housing in San Francisco.

#### FISCAL

##### Revenues

The proposed project would generate about \$1.2 million in total property, payroll, sales, gross receipts and utility tax revenues to the City General Fund, which would represent a net increase of about \$1,160,000 over revenues generated to the General Fund from the existing site.

##### Assessed Valuation and Property Taxes

Based on replacement costs, the project would have a fair market value of about \$63 million (in 1982 dollars). Based on the property's full assessed (or market) value, the project would generate a total of about \$630,000 in non-bond property tax revenues. An estimated property tax revenue of \$595,000 would accrue to the City's General Fund. This amount would be a net increase of about \$588,000 over existing (\$7,000) non-bond property tax revenues to the City. The project would also generate total property tax revenues of about \$48,000 (\$47,400 net) to BART; \$89,200 (\$88,100 net) to the San Francisco Unified School District; \$15,700 (\$15,550 net) to the San Francisco Community

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College District; and \$1,500 (\$1,500 net) to the Bay Area Air Quality Management District (see Table 5).

The building would also generate property tax revenues to be used to retire bond debts. The tax rate at which these revenues would be generated in 1985 would depend on the amount of principal and interest payments due in that year and the total assessed value of property in San Francisco. The rate in 1981-82 is \$0.19 per hundred dollars of assessed value. If that were still the rate in 1985, when the building would be occupied, bond payment revenues from the building would be about \$119,700, (1982 dollars) a net increase of about \$118,200 above existing 1981-82 bond retirement revenues of about \$1,500.

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TABLE 5: DISTRIBUTION OF PROPERTY TAX REVENUES FROM PROJECT SITE IN 1985  
(1982 dollars)

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<u>Agency</u>	<u>Ad Valorem Tax Rate*</u>	<u>Percent*</u>	<u>Revenues**</u>
City and County of S.F.	\$0.945	79.4	\$595,262
S.F. Unified School District	0.142	11.9	89,214
S.F. Community College District	0.025	2.1	15,744
Bay Area Air Quality Management District	0.002	0.2	1,499
BART	<u>0.076</u>	<u>6.4</u>	<u>47,981</u>
TOTAL	\$1.19	100.0	\$749,700

---

\* Rounded

\*\* Based on the 1981-82 composite tax rate of \$1.19 per \$100 of assessed valuation and an assessed valuation of \$63 million.

SOURCE: San Francisco Controller's Office, calculations by ESA

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#### Payroll/Gross Receipts Tax

On August 5, 1982, the State Supreme Court ruled (City and County of San Francisco versus Farrow) that increased payroll and gross receipts taxes adopted by the Board of Supervisors (Ordinances 113-80 and 119-80) but approved by less than two-thirds of the voters in San Francisco, are constitutional and not violative of California Constitution Article XIII A.



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Tenants of the proposed building would pay either the payroll or gross receipts tax, whichever is greater./5/ Assuming that 85% of the tenants would pay a payroll tax, a 1982 average wage of about \$25,000 for downtown office workers/6/ and the current approval payroll tax rate of 1.5%, payroll tax revenues from the project would be about \$422,300. The owners of the project would pay a 0.3% gross receipts tax on their rental income. The estimated total annual rental income for the project would be \$14.1 million (1982 dollars). Gross receipts tax revenues therefore would be about \$42,200. Total payroll and gross receipt tax revenues would represent a net increase in payroll and gross receipt taxes generated by the site, as no local business taxes are currently generated by the existing site (see Table 6).

The 1.5% payroll tax and 0.3% gross receipts tax are the rates that were approved by Board of Supervisor's Ordinance 118-80 and 119-80. These rates could be increased in the future if the Board of Supervisors enacted new ordinances increasing payroll and gross receipt tax rates./7/

#### Sales and Parking Taxes

Sales tax revenues would be generated by both employee expenditures and sales from retail uses on the site. Based on a rate of 1.25% of gross retail sales, estimated sales tax revenues accruing to the City from employee expenditures for retail goods and on-site retail sales after project completion would be \$20,600. It is assumed that there is very little or no sales tax revenues generated from existing employee expenditures. However, a 15% parking tax collected by the existing garage on the site would no longer be provided to the City General Fund. Based on an annual gross receipts of \$348,000, the 15% parking tax provides \$52,200 to the General Fund.

#### Utility Taxes

General Fund revenues are generated to the City by utility taxes on water, gas, electricity and telephone. The existing site utility use is very limited and negligible revenue (under \$100) to the City is generated from this tax. Based on estimates of utility use, the project would generate about \$50,000 annually from utility taxes (see Table 6)./9/

TABLE 6: DIRECT NET TAX REVENUES GENERATED TO THE GENERAL FUND FROM THE PROPOSED PROJECT

Tax Category	Tax Rates (1981-82)	REVENUES		
		Existing Site	Proposed Project	Net Increase (Decrease)
Property Tax	79.4% of \$1.19/\$100 fair market value	\$7,400	\$595,262	\$587,862
Payroll Tax*	1.5% of gross payroll expenditures	\$750	422,300	421,550
Gross Receipts Tax	0.3% of total rental income	negligible	42,200	42,200
Sales Tax**	1.25% of gross retail receipts	negligible	20,606	20,606
Parking Tax	15% of gross receipts	52,200	0	(52,200)
Utility Tax*	0.5-0.55% of gross expenditures	negligible	50,000	50,000
TOTAL		\$60,350	\$1,130,368	\$1,070,018

\*See Notes 5-9 on p. 86 for sources and assumptions used to derive payroll, gross receipts, sales and utility tax revenues.

\*\*On-site retail sales and for employee expenditures and employee expenditures are included in the sales tax category.

SOURCE: Environmental Science Associates, Inc.

#### Total Revenues

General Fund revenues for the City and County of San Francisco from the project would total about \$1.13 million, based on the tax rates and fees in effect in late 1982. General Fund revenues from the existing uses on the site totalled about \$60,300 in 1981; the project would result in about a \$1.07 million net increase in General Fund revenues (see Table 6). Estimated total and net revenues accruing to the General Fund from the project site are based on 1982 tax rates and business conditions. Total revenues could change if: property tax distribution to the City and County changes in future years; payroll taxes fluctuate due to employee salaries; office and retail rents



fluctuate, thereby affecting gross receipts tax, and, if costs for utilities change, particularly telephone costs, which are the largest component of the total utility users tax.

### Costs

#### Muni

- The estimated 1980-81 (most recent Muni estimate) net marginal cost (or increase in the deficit for Muni operations) per peak-hour ride is \$0.39./10/ The project would generate about 180,000 rides per year which could generate a cost deficit to the Muni of about \$70,100;/10/ the annual deficit attributable to existing employment at the site is about \$300. After subtracting the existing deficit, the project would result in a net deficit for Muni operations of about \$69,800 per year. The project would pay for this deficit through its contributions to the General Fund. In the 1981-82 fiscal year, 10% of General Fund revenues were allocated to Muni. Based on the net General Fund revenues that would be generated by the project, the contribution to Muni would be about \$107,000 (1982 dollars) at project completion. Based on the marginal cost figures provided by Muni, the project would more than offset the Muni deficit generated by the project through its revenue contribution to the General Fund./10/ This conclusion should be qualified because the Muni deficit-per-ride figure is based on 1980-81 data, the marginal cost is based on all rides and not peak-period riders, and the total project-related deficit is calculated using only those workers who would use Muni as their primary mode of transportation while excluding those workers who would use a combination of transportation modes, such as Muni and Southern Pacific.

Effective April 1, 1982, the Muni fare per ride was increased from \$0.50 to \$0.60. The increase was triggered primarily to meet the fare box revenue requirements of Assembly Bill (AB) 1107. AB 1107 allows Muni to receive a portion of the one-half cent BART sales tax revenue for operating expenses provided that at least one-third of Muni's annual operating cost is paid from fare box revenues.

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The San Francisco Board of Supervisors, on April 27, 1981, approved an ordinance (224-81) to assess new downtown commercial development to support Muni. The plan called for levying a one-time fee of up to \$5.00 per gross sq. ft. upon construction of new downtown office space. The ordinance, currently in litigation, would contribute funds for Muni transit services, including capital improvements and operating costs./7/ Assuming the one-time fee is upheld, the project could generate up to \$1.6 million in one-time fee revenues to Muni.

- According to a memorandum entitled "Muni's Plans to Accommodate Downtown Growth" issued by Dean Macris, Director of Planning, August 5, 1982, Muni expects to be able to meet projected cumulative demand due to downtown office development without new City taxes. On the basis of the worst-case scenario in the memorandum, the San Francisco Municipal Railway Improvement Corporation, a non-profit corporation established in 1971 for the purpose of selling bonds for transit improvements, may have to raise about \$111 million through the sale of bonds over a 10-year period to finance Muni expansion.

#### BART

In the 1981-82 fiscal year, the estimated per-paid-passenger fare deficit for BART is \$1.10./11/ Based on about 93,000 rides per year, the estimated annual BART deficit attributable to the project would be \$102,300;/12/ the current BART deficit generated from the existing site is \$600, resulting in a net deficit of \$101,700 (\$102,300 - \$600). The project would generate a net total of \$52,900 in revenues to BART, including \$47,400 in net property tax revenues, and \$5,500 from the 75% of the 0.5% BART sales tax. This amount does not include the remaining 25% of the 0.5% BART sales tax revenue distributed among BART, Muni and AC Transit by MTC. After subtracting BART's revenues from sales and property taxes which would be generated from the project, the net fare deficit of BART would be about \$48,800.



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BART recently increased its base fare in order to increase fare-box revenues to fund the capital improvement plan. The estimated 1981-82 per-paid-passenger fare deficit will change as a result of the increase. The change in the deficit resulting from the fare increase will be determined in October 1982./11/

##### Costs and Net Revenues

Costs to San Francisco for providing municipal services to the proposed project are difficult to estimate. Most evidence indicates that overall costs per unit of service provided (per sq. ft. or per employee) to the new building would be lower than for the existing buildings (see Appendix C, Table C-3, p. 412). This reduction in per sq. ft. costs is primarily due to improvements in fire and security protection systems in new construction. Costs for water and sewer service would be paid through user charges.

In general, existing public facilities, equipment, and labor are adequate to serve the project. While costs for servicing the site would increase because of the larger floor space and employment, costs per unit of service would not increase, and may actually decline.

##### CUMULATIVE AND INDIRECT EFFECTS

##### Downtown Office Space

The proposed project, together with other major downtown office buildings which are under formal review (4.2 million sq. ft.); have been approved (5.4 million); and are under construction (7.8 million) would add about 17.4 million sq. ft. of office space if all were to be built (see Appendix A, Tables A-2 and -3, pp. 399-403). Approximately 1.3 million gross sq. ft. of space which would be demolished for new buildings, the net increase would be about 16.1 million gross sq. ft. If all 16.1 million sq. ft. of office space were to be completed by 1990, there could be a short-term cumulative impact of

oversupply while the market adjusts itself to absorb the new space. During this period commercial rents would be expected to decline, especially in the core of the downtown area and vacancy rates would rise. The number of proposed new office developments could decline if there is not sufficient demand for office space presently planned or under construction, and for office space that will become available due to existing leases that will expire. The overall effect of this slowed growth rate in downtown office development would be to relieve pressure for replacement of older buildings with new ones, and for conversion and rehabilitation of existing low-intensity retail, warehouse and industrial use with office use, most notably in the South of Market area.

##### Housing

The relationship between downtown office growth and housing demand in San Francisco was documented in a report prepared by Recht, Hausrath and Associates, Economists, that appears as Appendix C, pp. 289-329, of the 101 Montgomery Street EIR, certified by City Planning Commission Resolution 8941, May 7, 1981. This report is available for public review at the Office of Environmental Review, 450 McAllister Street, 5th floor, and is hereby incorporated by reference into this EIR pursuant to Section 15149 of the California Environmental Quality Act (CEQA) guidelines. In summary, this document states that relatively high wages and employment opportunities are attracting people to San Francisco, but many people cannot afford the high housing costs in the City. The report estimated the residency patterns of new households that would be attributable to a new high-rise office building and discussed various employment growth assumptions and their housing market implications.

The project would comprise 324,640 gross sq. ft. of new office space as part of a cumulative total of about 16.1 million gross sq. ft. of net new office space which is now under construction, approved, or under formal review (based on the total net new gross office space in San Francisco found in Table A-3, p. 402). The project would be about 2% of the total new office space.



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If the assumptions used and explained in the 101 Montgomery Street EIR were applied to cumulative office development, i.e., 15% to 30% of the new employees generated by cumulative office development would be expected to move to San Francisco and the average household would be occupied by 1.4 downtown workers, between 6,900 and 13,800 new households attributable to new office space development would add to the housing demand in San Francisco. If the assumptions used in the formula prescribed by the Office Housing Production Program (OHPP) Interim Guidelines of January 1982 were used (i.e., 40% of the new employees attracted to the new jobs created would want to live in San Francisco and the average household would be occupied by 1.8 downtown workers), about 14,300 new households attributable to new office space development would add to the housing demand in San Francisco. These projections of new households are based on 16.1 million gross sq. ft. of net new office space, which includes all projects listed in Table A-2, p. 399. The employment and housing projections shown in Table C-1, p. 407, exclude employees in existing buildings to be demolished on the sites of proposed buildings.

This impact on the housing market would be mitigated to a certain extent because various office developers, including Highfield Stevenson Partnership, have agreed to provide units, through City Planning Commission final approval resolutions, or have proposed units on-site./13/ Table C-1, p. 407, shows the projected effects of downtown office development on the San Francisco and regional housing markets.

Cumulative office development would increase the City's current high ratio of jobs to housing supply. Housing demand would increase in an already tight housing market. In market situations where demand outstrips supply, prices can be expected to increase. Factors independent of office development and outside the control of the City, for example immigration, interest rates, State and Federal tax policies, and economic trends, also influence the housing market. Quantification of the effects of cumulative office development on San Francisco housing prices is not possible.

- The new demand could be accommodated through additions to the housing stock, increases in the number of office workers per household, and/or displacement

#### IV. Environmental Impact

of existing residents. Large additions to the San Francisco housing stock are not anticipated in the near future because the housing construction industry has declined due to high costs and interest rates. Census data indicates that the number of persons per household has historically been declining. This demographic trend will probably not reverse itself in the next few years due to a variety of factors, including divorces and separations, departure of young adults from families, and the increasing proportion of elderly population. It has been suggested that gentrification -- the replacement of low-income households by more affluent ones -- would occur./14/

#### Fiscal Considerations

Net costs of providing services to cumulative downtown development are difficult to quantify. Appendix C, Table C-3, p. 412, discusses some of the various approaches that have been attempted to address the issue of net fiscal costs of downtown development.

According to some of the studies, downtown development could result in an initial fiscal benefit. Since revenues to the City would probably increase at a slower rate than costs, due to Proposition 13 limitations on property tax increases, there could be a time when cumulative costs of providing services to currently proposed and approved development would be higher than revenues provided. This would be the case only if no new revenue sources are found, the rate of new development declines, and proposed development is not sold at some future date.

#### NOTES - Employment, Housing and Fiscal Factors

/1/ Projections are based on the Bay Area Input-Output Model from Cooperative Extension Service, University of California, Berkeley, San Francisco Bay Area Input-Output Model 1967-1974, July 1978. A multiplier of 1.18 was used for FIRE and 1.55 for construction.

/2/ Dean Macris, Planning Director, Department of City Planning, July 20, 1981, Memorandum. The housing formula is as follows:

$$\frac{\text{Gross square feet of office space}}{250 \text{ sq. ft. per employee}} \times \frac{0.40}{1.8} = \text{number of required units}$$



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/3/ The formula emerged from a study undertaken by Recht Hausrath and Associates for the 101 Montgomery Street EIR, pp. 289-329. The text and the analytic methods used in the study can be found in Appendix C of the 101 Montgomery Street Final EIR, EE 80.26, certified by the San Francisco Planning Commission May 7, 1981. The formula is as follows:

$$\frac{\text{Gross sq. ft. of office space}}{250 \text{ sq. ft. per employee}} \times \frac{0.15}{1.4} \text{ to } \frac{0.30}{1.4} = \text{units of housing}$$

/4/ Questor Associates, Feasibility of Performing a Housing Affordability Analysis, June 15, 1982.

This study is on file and available for public review at the Office of Environmental Review, 450 McAllister, 5th Floor.

/5/ Tax Collector's Office, Payroll Expense Tax and Business Tax Ordinances.

/6/ Bank of Canton Final EIR, EE 80.296, certified July 15, 1982. About 15% of the tenants would be exempted from paying a payroll tax under Ordinances 118-80 and 119-80.

/7/ Buck Davenport, City Attorney, telephone communication, September 7, 1982 and Diane Barry, City Attorney, telephone communication, September 20, 1982.

/8/ Sales tax revenues were estimated as follows: 1) 1,325 employees x \$1,096 average expenditures per downtown workers x 0.0125 (sales tax rate) = \$18,153; 2) 1,635 sq. ft. of retail space x \$120 gross sales/sq. ft./year x 0.0125 (sales tax rate) = 2,453; 3) \$18,153 + 2,453 = \$20,606 total sale revenues.

/9/ Utility user's tax revenues were calculated as follows, using 1981 utility rates:

water:	2 million cubic ft. per year x \$0.00414 per cubic ft. x 5% tax = \$420.
gas:	63,000 therms per year x \$0.49 per therm x 5% tax = \$1,500 per year.
electricity:	7.6 million KWH per year x \$0.0707 per KWH x 5% tax = \$27,000 per year.
telephone:	267,100 net sq. ft. x \$1.40 per sq. ft. x 5.5% tax = \$20,600.
TOTAL	\$50,000 (rounded to the nearest \$1000).

/10/ According to Bruce Bernhard, Muni Chief Accountant, telephone communication, August 10 and 23, 1982, the average \$0.39 deficit per mile is based on 1980-81 Muni budget figures of an additional cost per ride (marginal cost) of \$0.71 and an average fare revenue per trip of \$0.32. Muni is unable to provide more recent data on cost and revenue figures per passenger. The deficit due to the existing employees at the site is: 5 employees x 29% who ride Muni x 468 rides per year x \$0.39 deficit per rider equals \$265. The deficit due to the project is: 1,325 employees x 29% ride Muni x 468 rides per year x \$0.39 deficit = \$70,133. The 29% transportation modal split is taken from the Department of City Planning, October 1980, "Guidelines for Environmental Evaluation - Transportation Impacts." The 468 rides per year assumes 260 work days per year, two rides per day, and absenteeism of 10% (vacation, holidays and sick days).

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/11/ Ward Belding, Senior Economic Analyst, BART, telephone communication, August 20, 1982.

/12/  $1,325 \text{ employees} \times 15\% \text{ ride BART} \times 468 \text{ rides/year} \times \$1.10 = \$102,316.$

/13/ The San Francisco Office Housing Production Program, August 19, 1982.

/14/ Report of the Citizen's Housing Task Force, San Francisco, July 29, 1982 and Berkeley Planning Associates, Displacement in San Francisco, September 2, 1980.

#### C. TRANSPORTATION

##### TRIP GENERATION

Project office and retail space would generate about 5,100 person-trips per day, 4,500 from the office space and 600 from the retail space./1,2/ The existing garage accommodates about 300 parked cars, generating an estimated 1,000 person-trips daily. The net increase in daily person-trips to the project site would be about 4,100.

P.M. peak-hour travel generated by the office and retail space would total about 940 trips. Projections of travel by mode based on the existing pattern of travel in the downtown area would distribute about 310 of these peak-hour person trips to the automobile, 250 to Muni, and the remaining 380 principally to other public transit. Of the 310 peak-hour person trips by automobile, about 20 drivers would park on site; others would compete for public parking off site.

##### CUMULATIVE IMPACTS (TRIP GENERATION)

A total of 17.4 million gross sq. ft. of new office space is proposed, approved or under construction in the City. Tables A-2 and -3, in Appendix A, (pp. 399-403) show the projects included in the cumulative analysis.

Approximately 1.3 million gross sq. ft. of existing office space would be replaced by the proposed development, resulting in about 16.1 million gross sq. ft. of net new office space. This growth, and the 0.5 million gross sq.



ft. of net new retail construction, would generate approximately 48,000 person trip ends during the weekday p.m. peak hour.

Table 7 shows estimates of future trips generated by cumulative office development in the greater downtown area. Peak-hour travel by mode for the project and other office developments is shown in Table 8. The modal assignments have been made assuming existing travel patterns and do not attempt to predict any modal shift (see Appendix D, p. 413, for further discussion). As the bridge and freeway system serving the City is currently near capacity during peak hours and as the supply of parking is limited, the present population of persons traveling by single-occupant automobiles might be expected to change in the future. Much of the City-wide peak-hour increase might be expected to be accommodated by a shift from single-occupant automobile to ridesharing or public transit.

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TABLE 7: PROJECTED PEAK-HOUR PERSON-TRIPS FOR OFFICE BUILDINGS PROPOSED, APPROVED AND UNDER CONSTRUCTION IN THE GREATER DOWNTOWN AREA AS OF AUGUST 6, 1982

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<u>Buildings*</u>	<u>Office (sq. ft.)**</u>	<u>Retail (sq. ft.)**</u>	<u>Peak-Hour Person-Trips</u>
Under construction	7,427,350	136,050	21,550
Approved	4,862,600	150,310	14,880
Under Formal Review	3,476,970	243,150	10,630
71 Stevenson Street	<u>324,600</u>	<u>6,000</u>	<u>940</u>
TOTAL	16,091,520	535,510	48,000

\* All office buildings identified as of August 6, 1982 (see Tables A-2 and -3, Appendix A, pp. 399-403. The 71 Stevenson St. project has been separated from the projects under formal review totals shown in Table A-3.

\*\* Net new construction = Total new construction minus existing space demolished.

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In this and other San Francisco EIRs, a land-use type of approach has been used to estimate employment and the resultant transportation impacts of both the proposed project and cumulative development. An alternative type of approach is to forecast travel demand based upon regional projections of future employment (employment trend approach)./3/ Appendix D, pp. 420-423, contains a discussion of the differences between the two approaches.

TABLE 8: PROJECTED PEAK-HOUR PERSON-TRIPS BY TRAVEL MODE\*

Modal Type	Projects Under Construction**	Approved Projects**	Projects Under Formal Review**	71 Stevenson St. Project	Total
Automobile	6,980	4,290	3,650	310	15,230
Muni	5,480	3,370	2,900	250	12,000
BART	3,700	2,280	1,950	160	8,090
AC	1,720	1,040	880	80	3,720
SamTrans	250	160	130	10	550
SPRR	940	580	490	40	2,050
GGT	820	500	430	40	1,790
Ferry	180	100	90	10	380
Other	<u>1,480</u>	<u>1,180</u>	<u>1,490</u>	<u>40</u>	<u>4,190</u>
	21,550	13,500	12,010	940	48,000

\* Projections based upon distribution shown in Table D-3, Appendix D, p. 416.

\*\* Individual projects are listed in Table A-2, Appendix A, p. 397. The 71 Stevenson St. project has been separated here from the projects under formal review totals shown in Table A-3.

#### PUBLIC TRANSIT

The transit analysis (conducted using Department of City Planning Guidelines) analyzed cumulative and project ridership based on existing capacity. As a "worst case", this analysis assumes no expansion in the transit system and the results are not dependent on increased City, State, or Federal funding. If existing City, State, or Federal funding were to decrease, operating conditions on the Muni and other carriers would be expected to deteriorate. Conversely, if City, State, and Federal funding were to increase over existing levels, operating conditions would be expected to improve. The estimated ridership, for the 16.1 million gross sq. ft. of net new cumulative office development and the 0.5 million gross sq. ft. of net new retail development, and for the project, and load factors based upon existing capacity are shown in Table 9. As all of the transit agencies have five-year plans for improving service, load factors based upon capacity proposed to occur in the current five-year plan cycle (1982-1987) for each transit agency are also shown in Table 9.



TABLE 9: AFTERNOON PEAK HOUR OUTBOUND TRANSIT RIDERSHIP

Agency	RIDERSHIP		LOAD FACTOR (Existing Capacity)*		LOAD FACTOR (Proposed Capacity)**	
	Existing (1982)†	Existing plus Cumulative	Existing	Existing plus Cumulative w/o Project	Existing plus Cumulative w/o Project	Existing plus Cumulative with Project
		plus Project				
Muni***	25,330	36,800	0.91	1.32	1.33	1.11
BART						
Transbay	13,600	18,815	0.90	1.24	1.25	0.76
Westbay	6,445	9,165	0.61	0.87	0.88	0.56
AC Transit	9,560	13,205	0.72	0.99	0.99	0.99
SamTrans	1,700	2,240	0.78	1.03	1.03	0.36
SPRR	5,180	7,190	0.78	1.10	1.09	0.91
Golden Gate						
Motor Coach	4,510	6,265	0.66	0.92	0.91	0.73
Ferry	800	1,170	0.39	0.57	0.56	0.33

† Ridership counts: BART, March 1982; AC Transit, composite of weekdays, May 24 and 27, June 3, 6, and 7, 1982; Golden Gate Transit, June 14, 1982; SamTrans, February 1982; Southern Pacific-Caltrans, February 25, 1982.

\* Load factor based upon existing (recommended) maximum capacity. A load factor of 1.00 is equivalent to 100% of recommended seated and standing capacity being used. Recommended maximum capacity is less than "crush" loadings that occur occasionally.

\*\* Proposed capacity as specified by each agency's Five-Year Plan.

\*\*\* 1982 Muni ridership is approximate, based on a compilation of Muni ridership by the Department of City Planning Staff. Muni data are the average of the three most recent schedule checks (observations) made by Muni for each route between August 1981 and August 1982.

SOURCE: Environmental Science Associates, Inc.

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Project trips and cumulative trips on all Muni lines downtown are expected to result in at least 12,000 new outbound p.m. peak hour trips. The project itself would generate approximately 250 p.m. peak-hour Muni trips.

Project-generated riders during the p.m. peak hour would be about 2% of the demand from the 16.1 million gross sq. ft. of net new cumulative office development and 0.5 million sq. ft. of retail development (see Table 8, p. 89). There are about 25,300 current peak-hour riders on the 38 lines with in 2,000 ft. of the project. The total increase in peak-hour Muni patronage caused by the project would be 1%. This increase would be approximately equivalent to an average of one person on each fully loaded (considered to be 150% of seating capacity) bus and 3 persons on each fully loaded Light Rail Vehicle (LRV).

- The addition of the ridership from the projected 16.1 million gross sq. ft. of office space and 0.5 million gross sq. ft. of retail space would cause demand on most of the affected Muni lines to exceed existing capacity. This would also be the case for BART transbay and SamTrans. Southern Pacific/CalTrans would not operate in excess of its recommended maximum capacity under the existing-plus-cumulative conditions as well as after addition of the project demand. As the cumulative demand increases, the length of time of peak loadings would increase, spreading peak-of-the-peak conditions over time. As some lines only operate during heavy demand periods (for example, express service for one to two hours during peak periods), there may not be additional capacity available to allow spreading over time without adding more runs. (Additional runs may not require increases in vehicle fleet size as the additional runs would be extending the peak period level of service over a longer period of time. Additional runs would cause increases in operating and maintenance costs.)
- Assuming that existing funding continues and proposed expansion occurs, the future load factors on the transit agencies would be as shown in Table 9. Muni is proposing to increase systemwide capacity by 19%. Assuming the increase is to be provided uniformly, average loading including ridership from cumulative demand would be over capacity. If Muni does not apply the increase uniformly but rather gives a greater increase in capacity on the lines serving



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the downtown and a lower increase in capacity on other lines, the load factor would be lower than those shown for Muni in Table 9, p. 90. BART is projecting a peak hour capacity of 16,500 seats transbay (eastbound) and 11,000 seats westbay (westbound). Recommended maximum capacity would be 24,750 and 16,500 respectively. Average loadings, including ridership from the projected 16.1 million gross sq. ft. of office and 0.5 million gross sq. ft. of retail development, would not be over capacity with the anticipated five-year plan capacity. AC Transit does not have any increases proposed for its transbay service and would therefore be operating at 99% of its recommended maximum capacity with the cumulative demand. SamTrans is proposing to have a capacity of between 4,800 and 5,000 seats per hour on its San Francisco routes. Recommended maximum capacity would be 6,250 riders. Average future loadings on SamTrans would be under seated capacity when the anticipated capacity becomes available. Southern Pacific/CalTrans is proposing to increase seating capacity by 22%. Station improvements, including additional parking, are proposed. Southern Pacific would therefore operate in excess of its recommended maximum capacity with the cumulative demand. Golden Gate Transit is proposing to increase peak period (6-10 a.m.) motor coach capacity by 25% over existing levels and to increase ferry service by addition of another Larkspur Ferry (an increase of about 70% over existing service). Average future loadings (including the cumulative demand) on Golden Gate Transit would not exceed capacity when the proposed additions become available./4/

#### PEDESTRIANS

Upon project completion, the net increase in pedestrian travel to or from the project site during the p.m. peak-hour would be about 700 person-trips. This projection includes trips completed on public transit or in automobiles parked off-site, and deletes trips made to the existing garage on site (about 210) and trips which would be made in automobiles from the proposed on-site garage (about 30). These trips would use both Stevenson St. (about 500 per hour) and Jessie St. (about 200 per hour). Peak-hour (mid-day) pedestrian traffic on these two streets would be increased nearly 50% (400 new trips), causing Stevenson St. sidewalks to operate at about 15% of capacity. The Ecker Square Building, under construction at the corner of Ecker and Jessie Sts., is about

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30% as large as the proposed project. The effect of both projects on p.m. peak-hour pedestrian traffic on Ecker St. would be noticeable as about a 15% increase. On First St. and in crosswalks at the intersection of First and Mission Sts., the increase from the two projects would be just noticeable, constituting roughly 5% to 10% of total projected p.m. peak-hour pedestrian traffic in 1985.

The effect on pedestrian traffic on Jessie and Stevenson Sts. sidewalks of the recently proposed 614,000 sq. ft. office building at One Anthony Court is uncertain. That building would produce about 1,300 net new peak-hour pedestrian trips. Stevenson St. would be a possible route to the Embarcadero subway station and to the Ferry Building for less than 300 of these trips from this proposed development. (Design details of pedestrian entrances, curb cuts, etc. have not yet been finalized for this building.) These trips from One Anthony Court would not cause pedestrian volumes on Stevenson St. sidewalks to exceed capacity.

Pedestrians would continue to use the Jessie St. roadway as a walkway, as sidewalks of adequate width would not be in place to the east and west of the project. The project would provide a 6-ft.-wide sidewalk along the Jessie St. frontage, broken by about a 40-ft. curb cut for three loading stalls.

The cumulative effect of other new development at locations within 2,000 ft. of the site would be to increase pedestrian traffic about 50% above existing peak-hour levels. This would add about 800 pedestrians to Ecker St., increasing volumes there to about 30% of capacity (see Appendix D, Table D-2, p. 414, for definitions and criteria). The flow would be somewhat impeded, but individual pedestrians would retain some freedom to select walking speed and could avoid conflicts. About 500 pedestrians per hour would be added to the western sidewalk of First St., increasing volumes there to about 30% of capacity.

The project alone would not noticeably affect the operation of the crosswalks at the Mission/First intersection, but the cumulative effect of downtown development would be to increase pedestrian traffic in the crosswalks across Mission St. to about 100% of capacity, from 65% of capacity. Reservoir space



on the northwest corner of that intersection would become crowded; about 75% of the available area would be fully used.

The project would eliminate two existing 20-ft. curb cuts on Stevenson St. which now serve the garage on the site, replacing these with a single 20-ft. curb cut. The basement-level parking garage would generate about 160 vehicular trips through the curb cut across the Stevenson St. sidewalk each day. About 20 would occur during the p.m. peak hour, or an average of one every three minutes. The number of vehicles crossing the sidewalk would be reduced from the present, because of the removal of the present 300-space parking garage.

#### VEHICULAR TRAFFIC

Peak-hour vehicular traffic to and from the project site and vicinity would probably not differ from existing site-related traffic. This is because, although the project would replace a 300-space garage, and would include only 34 spaces, vehicular traffic to the site in excess of parking provided would occur as pick-up and drop-off trips at the site and in the vicinity. In the downtown as a whole, vehicular traffic would increase by the number of project-related trips and trips now made to the site garage. If pick-up and drop-off trips were made on Stevenson St. there could be a net increase of vehicle trips on Stevenson St.

Cumulative vehicular and pedestrian traffic from 16.1 million gross sq. ft. of net new office development would degrade service levels at all of the intersections shown in Table 10. After cumulative development, assuming existing traffic patterns and existing modal share relationships remain constant, the freeway ramp intersections at Mission/Main and Mission/Beale would be at service level F during the p.m. peak. This would occur with or without the 71 Stevenson project. Traffic volumes through the Mission-First intersection would be increased by cumulative traffic to 71% of capacity on Mission St. and 57% of capacity on First St. (through movements only). The left-turn movement from First St. onto Mission St. would become almost impossible (service level F) due to capacity pedestrian flows in the east crosswalk of the intersection. Under the existing signal timing, Mission St.

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through lanes would operate at level of service C. The congestion caused by conflicts between pedestrians and turning vehicles could not be remedied by changes to the signals.

TABLE 10: LEVELS OF SERVICE AT INTERSECTIONS IN THE VICINITY OF 71 STEVENSON ST. DURING PEAK-HOURS

	MISSION/BEALE (PM)		MISSION/MAIN (AM)		MISSION/FIRST (PM)		
	LOS*	V/C**	LOS	V/C	LOS	V/C	LOS***
Existing (1982)+	D	0.89	D	0.85	B	0.60	C
With cumulative development without 71 Stevenson+	F	1.58	F	1.27	C	0.75	D/E
Cumulative development with 71 Stevenson	F	1.60	F	1.32	C	0.75	D/E

\*LOS stands for Level of Service which is defined in Table D-1, Appendix D, p. 413.

\*\*V/C stands for volume to capacity ratio, the use of which is explained in Appendix D, p. 418.

\*\*\*Levels of Service in this column represent reductions in the capacity of this intersection caused by the action of high pedestrian volumes, and vehicles queueing "downstream" at freeway ramps on Mission St. east of this intersection.

+The 16.1 million gross sq. ft. of net new cumulative office and 0.5 million sq. ft. of retail development is listed in Table A-2, p. 399. The 71 Stevenson Street project has been separated from the approved project totals shown in Table A-3.

#### PARKING

The project itself would generate a demand for about 315 long-term parking spaces, and 30 short-term spaces. An additional demand for a maximum of about 300 parking spaces would be created by demolition of the existing parking garage. Thirty-four parking spaces would be provided in the basement of the proposed building. The 34 spaces provided by the proposed project would result in a net loss of 266 spaces.

The total effect of the project would be to create a demand for 610 spaces.



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The proposed garage would provide spaces to meet about 6% of the total demand. Through competition, many of the parkers from the project, and many of those displaced from the existing garage, would find spaces downtown, but in so doing would displace others to transit use, to parking in peripheral areas, or to ridesharing.

Using the methodology described in Appendix D, pages 413-423, long-term parking demand for the 16.1 million gross sq. ft. of net new cumulative office development and 0.5 million gross sq. ft. of net new retail space in the greater downtown area has been calculated to be about 15,600 spaces (including the project). The project would represent approximately 2% of the total demand. As long-term parking demand is typically work (employee) related and is more likely to be influenced by cost rather than by location (see Appendix D, p. 413), long-term parking demand has been assumed to be distributed over the greater downtown and South of Market areas rather than being concentrated near the proposed project location. A recent survey by the Department of City Planning shows about 37,000 off-street parking spaces in the C-3 district and an additional 6,500 spaces in the area bounded by The Embarcadero, Folsom, Eighth and Bryant Sts./5/ Based upon average occupancy, about 4,100 spaces are available on a daily basis.

The cumulative demand for the whole downtown area would create a theoretical net deficit of 11,500 spaces. Parking demand has been based upon existing travel patterns and is not dependent upon the availability of parking spaces or by the ability of the freeway and bridge system to carry the additional demand. Freeway and bridge capacity into downtown is essentially fixed at existing levels, as major construction would be required to add new capacity. Therefore, the net deficit of 11,500 spaces does not mean that 11,500 autos would be driving on City streets in search of parking. Rather, the travel demand represented by the parking deficit would most likely shift to ridesharing or transit. Increased ridesharing would not only reduce parking demand but would also reduce traffic impacts from the worst-case impacts shown in Table 10, p. 95. Increased transit use would add to the demands on the regional and local transit systems, particularly Muni.

The deficit may be less than this estimate as the survey did not inventory

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parking in the Civic Center area, the areas west of Eighth St., south of Bryant St. or north of Washington St. The survey did indicate that inside the study area about 6,000 parking spaces have been added since 1967 and approximately 1,400 are proposed to be added (exclusive of 4,845 parking spaces to be provided in Yerba Buena Center).

Current City policy, as stated in the Revisions to the Transportation Element of the Master Plan Regarding Parking, is to "Discourage the addition of new long-term parking spaces in and around downtown, limit the amount of new spaces to that which cannot reasonably be accommodated by transit and locate long-term parking facilities in areas peripheral to the downtown commercial district."/6/

The Master Plan Parking Policy has also stated the need to "encourage short-term use of existing parking facilities within and adjacent to the downtown core by converting all-day commuter parking to short-term parking in areas of high demand or to car/van pool parking where short-term parking demands are low."/6/ Accordingly, approximately 14,000 existing off-street spaces in the C-3-0 planning district could be converted to short-term-only parking if the City enacted legislation to establish public control over private garages.

Imbalances in long-term parking demand and potential supply, given projected cumulative development and demand, would be expected to encourage the use of car pools and van pools, or the creation of satellite (intercept) parking facilities in outlying non-residential areas or in outlying cities, with shuttle or expanded Muni service to the downtown area, or increased use of transit directly for commuters from San Francisco or from suburban centers (East Bay, North Bay, Peninsula). Peninsula residents, for example, could find Southern Pacific commuter trains more attractive if they could get no closer to downtown by car than the train terminal at Fourth and Townsend Streets. All transit options would add to the demands on the regional and local transit systems, however, particularly Muni.



## SERVICE VEHICLES

Three enclosed loading spaces, 35 ft. long by 12 ft. wide (minimum dimensions) would be entered by a backing maneuver from Jessie St., which is one-way eastbound. The project would receive about 70 truck and service vehicle stops per day, or an average of four vehicles at any one time. There would be some use of curbside space, which would occur in the existing yellow zone at the site on Stevenson St. Off-street loading recommendations (per CPC Resolution 9286, January 21, 1982) call for one space per 100,000 sq. ft. of gross floor space for office use, which would result in a recommendation of three spaces for the project per CPC Resolution 9286. The Planning Code, under Article 1.5 Section 152, would require two spaces of the project.

### NOTES - Transportation

/1/ The regional distribution, office trip generation, trip purpose and peak hour percentage are from Attachment 1 of the Guidelines for Environmental Impact Review, Transportation Impacts Department of City Planning, October 1980, and the modal split assignment is from Attachment 2 supplemented by survey data collected by Environmental Science Associates, Inc.

/2/ Retail trip generation is from Trip Generation, Insititute of Transportation Engineers (ITE), 1979. Rates have been adjusted from vehicle trip ends to person trip ends based upon an assumed vehicle occupancy of 1.4 persons per vehicle. The survey of retail travel was conducted by Environmental Science Associates at Embarcadero Center on Thursday, June 17, 1982 between 10:00 a.m. and 4:00 p.m.

/3/ The Department of City Planning, Office Environmental Review (OER), has issued a memorandum, dated July 2, 1982, dealing with the subject of the differences in the land-use and employment trend approaches, and recommending that both approaches be used in future EIRs to give a more balanced assessment of future peak transportation demand. This memorandum is on file with and available from the Office of Environmental Review, 450 McAllister St., 5th Floor. The memorandum calls out some of the fundamental differences between the two approaches and also details the limitations of each approach.

/4/ Muni projections from Municipal Railway Fleet Rehabilitation and Replacement Plan, San Francisco Public Utilities Commission, May 1982; BART projections from Marty Birkenthal of BART on August 18, 1982; SamTrans projections from Gregory Kipp of SamTrans on August 18, 1982; AC Transit proposals from Ted Reynolds of AC Transit on August 18, 1982; Golden Gate Transit proposals from Alan Zahradnik of Golden Gate Transit on August 19, 1982; Southern Pacific proposal from Jim Strong, Design Engineer with Southern Pacific, on August 26, 1982.

/5/ Inventory of Off-Street Parking Spaces, San Francisco Department of City Planning, May 24, 1982.

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/6/ Revisions to the Transportation Element of the Master Plan Regarding Parking, Resolution 7647, San Francisco Planning Commission, January 20, 1977.

##### D. OPERATIONAL AIR QUALITY

Project operation would affect air quality in two ways: emissions would be generated by project-generated traffic and from combustion of natural gas for space and water heating.

Vehicular emissions would be responsible for most project-related emissions. Daily emissions of pollutants resulting from project-related vehicular traffic in 1985 are shown in Table 11.

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TABLE 11: PROJECTED POLLUTANT EMISSIONS OF THE PROJECT IN 1985 (tons/day)  
COMPARED TO PROJECTED REGIONAL EMISSIONS

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	1985 Projected Pollutant Emissions (tons/day)	
	<u>Project*</u>	<u>Region**</u>
Carbon Monoxide	0.225	2,340
Hydrocarbons	0.020	515
Nitrogen Oxides	0.029	543
Sulfur Oxides	0.003	182
Particulates	0.034	536

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\*BAAQMD, 1981, EMFAC6C Vehicular Emission Factors.

\*\*Association of Bay Area Governments (ABAG), BAAQMD, MTC, 1982, 1982 Bay Area Air Quality Plan, p. 58. The region is the 9-county Bay Area Air Quality Management District.

SOURCE: Environmental Science Associates, Inc.

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Roadside carbon monoxide (CO) levels for streets carrying project-generated traffic were calculated for worst-case meteorological conditions and are shown in Table 12. The only increase in CO concentrations due to the project, about 2% for the one-hour average would occur on First St. The highest one-hour and eight-hour average concentrations would occur on Mission St. No air quality standards violations are expected to occur in the area as a result of the project or projected cumulative downtown development.



TABLE 12: PROJECTED LOCAL ROADSIDE CARBON MONOXIDE IMPACTS\*

Street	Averaging Time	1982	1985 Base**	1985 Base Plus Project
		(parts per million - ppm)		
First St. (north of Mission St.)	1-Hour	15.6	12.4	12.4
	8-Hour	8.5	6.7	6.7
Mission St. (west of First St.)	1-Hour	16.6	13.3	13.5
	8-Hour	9.2	7.2	7.2

\*Calculations were made for worst-case dispersion meteorology according to BAAPCD (now BAAQMD), 1975, Guidelines for Air Quality Impact Analysis of Projects, Updated for CARB, EMFAC6C emission factors, 1981.

\*\*1985 Base includes cumulative downtown development (see Appendix A, Table A-3, p. 402).

NOTE: The applicable standards are 35 ppm for one hour, and 9 ppm for eight hour average.

SOURCE: Environmental Science Associates, Inc.

Operational emissions resulting from natural gas combustion for space and water heating for the building would occur at roof level. These emissions (primarily nitrogen oxides) would be negligible relative to emissions from traffic. Electrical energy consumption would place an increased demand on local generation plants, possibly resulting in greater emissions from these facilities.

In summary, the project would add to local and regional accumulations of CO, hydrocarbons, nitrogen oxides, particulates, and sulfur oxides. The Regional Air Quality Plan found that ozone, formed from hydrocarbons and nitrogen oxides, would continue to be a problem in the Bay Area./1/ CO and particulates are also problems on a local level. Because the project would increase emissions of hydrocarbons, CO and particulates, attainment of the standards would be impeded. The project would probably have no measurable effect on citywide or regional concentrations or on the frequency of violations of the standards. Cumulative development could increase ambient concentrations and the frequency of standard violations if the control

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strategies for other emission sources that are envisioned in the Air Quality Plan are not implemented.

##### NOTE - Operation Air Quality

/1/ ABAG, BAAQMD and the Metropolitan Transportation Commission (MTC), July 1982, 1982 Bay Area Air Quality Plan, San Francisco Bay Area, Environmental Management Plan.

#### E. CONSTRUCTION NOISE

Project construction would occur in three stages: demolition, excavation and building construction. Throughout the two-year construction period, trucks would visit the site, initially hauling away dirt and debris and then bringing in building materials. These trucks would be audible in the project vicinity and represent distinct noise intrusions.

The San Francisco Noise Ordinance (Section 2907b) limits noise emissions from any powered construction equipment except impact tools to 80 dBA at a distance of 100 ft./1/ All powered construction equipment would be required to comply with this regulation. If a second piece of equipment were to be used simultaneously with the first, the resultant noise level would be increased by 3 dBA, resulting in an 83 dBA noise level 100 ft. from the pair. The Noise Ordinance (Section 2908) also prohibits construction work at night from 8:00 p.m. to 7:00 a.m., if noise from such work exceeds the ambient noise level by 5 dBA at the property line, unless a special permit is authorized by the San Francisco Department of Public Works. During construction, many types of equipment are used. Typical construction noise levels are shown in Table 13.

Noise levels during construction (especially excavation and exterior finishing) would reach as high as about 70 dBA in the Golden Gate University classrooms fronting Jessie St. and in offices in the Standard Oil Building fronting Stevenson St., and 65 dBA in adjacent buildings (California Farmers Publishing, Professional Color Laboratory, Yank Sing Restaurant, Vince's Beef House, Swallow Printing). Noise levels this high would interfere with communication and concentration, requiring raised voices to communicate at 3 ft. These noise levels would interfere with classroom lecture activities of



Golden Gate University. Noise has been associated with a narrowing of the focus of attention and therefore with distraction.

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TABLE 13: TYPICAL COMMERCIAL/INDUSTRIAL CONSTRUCTION NOISE LEVELS

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<u>Construction Phase</u>	<u>Average Noise Level*</u>
Ground Clearing	84 dBA
Excavation	89 dBA
Foundations	78 dBA
Erection	87 dBA
Finishing	89 dBA

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\*50 ft. from activity.

SOURCE: D.N. May, Ph.D., 1978, Handbook of Noise Assessment, Van Nostrand Reinhold Environmental Engineering Series, p. 211.

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The project would require four weeks of pile driving. The Noise Ordinance (Section 2907c) limits noise emissions from impact tools and equipment to 80 dBA at a distance of 100 ft., unless the Director of Public Works has approved intake and exhaust mufflers and shields or shrouds which provide maximum noise attenuation. To date, no muffled and/or shielded pile drivers have been approved for use in San Francisco. Thus, use of any impact-type pile driver would be in violation of the Ordinance.

Conventional unmuffled and unshielded pile drivers emit noise levels of 100 to 110 dBA at a distance of 100 ft. each time the driver strikes the pile. The lowest dBA sound level achieved has been in the high 80's at the 100-foot range. Actual noise emissions are dependent upon soil characteristics and the types of piles./2/

On the assumption of noise emissions of 100 dBA at 100 ft., pile driving would be audible to people on the streets within 1,000 ft. of the project site, where not shielded by intervening buildings. During pile driving, noise levels would reach as high as 85 dBA in the Golden Gate University and Standard Oil Buildings, and 80 dBA in the adjacent structures. Observations in humans exposed to brief sounds over about 70 dBA have shown there to be a

#### IV. Environmental Impact

general constriction in peripheral blood vessels, acceleration or deceleration of heart rate, and changes in breathing, size of pupils and salivary and gastric secretions./3/ Hypersensitive and normotensive (normal) persons have shown similar degrees of response (blood pressure elevation) to noise./4/ These are symptoms indicative of a generalized stress reaction. Noise is responsible for induction of the physiological arousal characteristics of a generalized stress reaction, at levels for below that responsible for induction of hearing damage./5/ General psychological distress produced by noise can add to the overall stress of life and in this way contribute to the incidence of non-auditory disease./3/

Intermittent noises such as pile driving noise reduce the perception of control over the environment. This loss of control frequently results in a depressed mood and motivation./5/ Repeated impulse and intermittent sounds of high level appear more likely to disrupt performance than continuous or steady sounds of comparable level./6/ Disease tends to be more widespread among those exposed to sound that is unpredictable or intermittent, compared to steady or continuous sound./5/ Research on non-auditory effects of noise have dealt with chronic exposure in field research and short-term exposure in laboratory experiments. The actual non-auditory effects of short-term exposure of humans have not been well documented. Stress characteristics appear immediately upon exposure. The relationship of stress to disease incidence as related to length of exposure is not defined. Because of similarities in results between short-and long-term research, the effects described above would at most appear for the duration of the exposure. Their persistence is not well-known but it is unlikely that they would last after the period of exposure. Despite inconsistencies in studies, community noise is suggested to be associated with increases in the incidence of cardiovascular pathology and factors related to risk of cardiovascular pathology (such as elevated blood pressure)./4,5/

The operations of Professional Color Laboratory (at 96 Jessie St.), located immediately adjacent to the southwest of the site, are especially sensitive to vibrations. Should pile driving occur during business hours (8:30 a.m.-5:30 p.m.), operations would essentially be eliminated./7/ The Department of Public Works analyzes the impacts of pile driving for every project and



#### IV. Environmental Impact

frequently requires staggered hours for pile driving. The most frequent requirement in commercial areas is limitation to the period 1 p.m. to 9 p.m. Evening classes are conducted during the week at Golden Gate University, located at 536 Mission St. south of the site, where evening classes are held and piledriving during these hours might possibly disrupt classes. Piledriving for the Ecker Square Building, adjacent to Golden Gate University, was limited between the hours of 12 a.m. to 6 a.m./8/ No complaints by students of noise from piledriving at the Ecker Square Building were received, nor were classes reported to have been disrupted./9/ All measures imposed by the Department are negotiable and are subject to revision during construction should circumstances require new action./2/

#### NOTES - Construction Noise

/1/ Decibel (dB) is a logarithmic unit of sound energy intensity. Sound waves, traveling outward from a source, exert sound pressure level (commonly called "sound level"), measured in decibels. dBA are decibels corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels.

/2/ Ray McDonald, Chief Building Inspector, Bureau of Building Inspection, Department of Public Works, telephone conversation, July 6, 1981.

/3/ Effects of Noise on People, The Central Institute for the Deaf, U.S. EPA, 1971.

/4/ Hypertension Outlook: Special Report from Milan: The VIIth Scientific Session of the International Society of Hypertension, Primary Cardiology, March 1982.

/5/ Sheldon Cohen, et al., "Cardiovascular and Behavioral Effects on Community Noise," American Scientist, Volume 69, September-October 1981.

/6/ National Institute of Occupational Safety and Health, Occupational Exposure to Noise, U.S. HEW, 1972.

/7/ Mike Perrick, Owner, Professional Color Laboratory, telephone conversation, March 3, 1982.

/8/ Mithoo Baxter, Perini Construction Company, telephone conversation, September 1, 1982.

/9/ Charollette Edwards, Administrative Assistant, Public Relations, Golden Gate University, telephone conversation, September 1, 1982.

### F. ENERGY

The project site is served by Pacific Gas and Electric Company (PG&E), which supplies natural gas, electricity and energy conservation assistance to its service area. PG&E obtains some of the electricity it supplies from renewable geothermal and hydroelectric sources. Coal, oil, natural gas and nuclear fuels, all nonrenewable sources of energy, are used to generate most of the electricity PG&E provides. Operation and maintenance of the existing parking garage and warehouse on the site is estimated to require annually about one billion British thermal units (Btu) of electricity./1/

#### Construction Energy Requirements

Removing the parking garage would require an unknown amount of energy for demolition and debris removal. Site development, fabrication and transportation of building materials, worker transportation, and building construction would require about 600 billion Btu of gasoline, diesel fuel, natural gas, and electricity; this number is based on methods presented in a recent study of construction in the U.S./2/

#### Operational Energy Requirements

Electricity and natural gas for project operation would be provided by PG&E; PG&E's electricity and natural gas distribution systems in the site vicinity are adequate to serve the project./3,4/ PG&E would probably meet new electrical demand primarily through increased use of coal, oil, natural gas, and nuclear fuels. Cogeneration (i.e., production of electricity from waste heat generated by industrial processes), wind turbine generators, and purchases of electricity from other utilities may also supply future electrical demand.

Electricity would be used by the project for lighting, air conditioning, ventilation, elevator operation, office equipment operation, and plumbing system pumping. Natural gas would be used to supply space and water heating via hot water boilers. Low-sulfur fuel oil would power the emergency



generator and fire pump. The project would make no use of solar energy or other renewable energy resources.

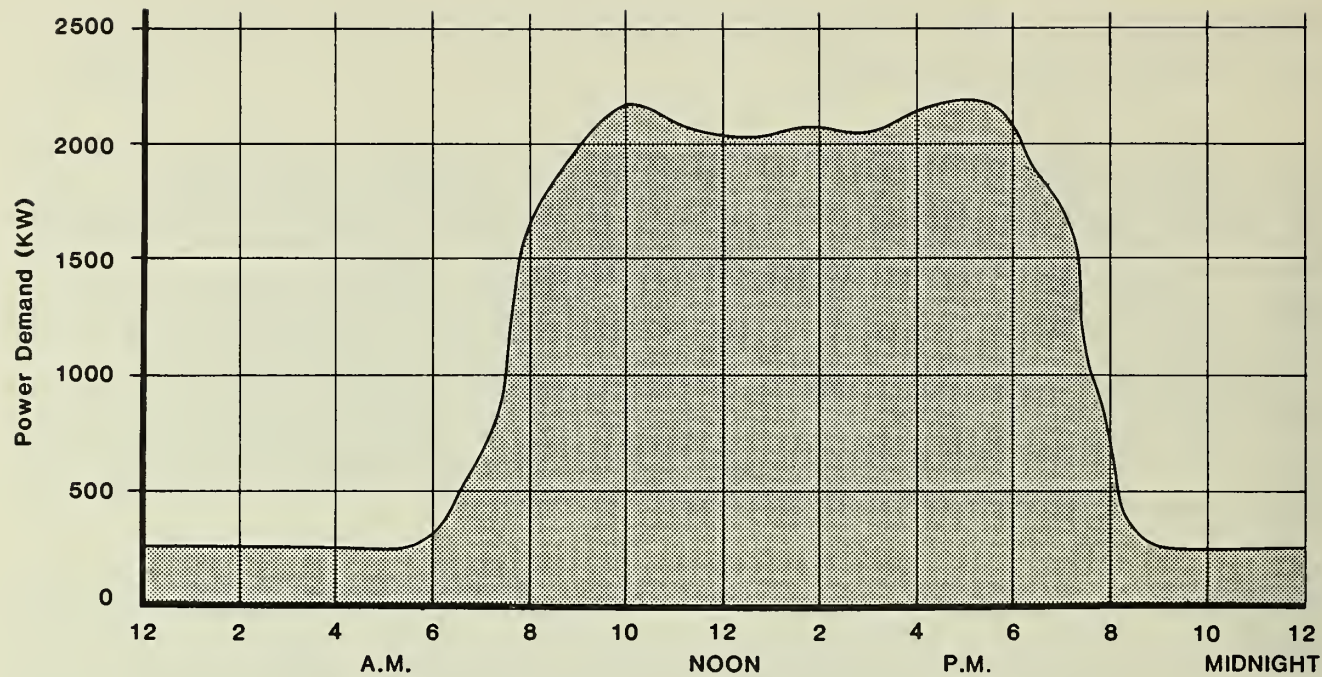
The project's connected kilowatt load would be about 3,000 kilowatts (kw). The project would consume about 7.6 million kilowatt-hours (kwh) (77.8 billion Btu) of electricity annually, or about 636,000 kwh per month./5/ Peak electrical demand would be about 2,200 kw, and would occur between 8:00 a.m. and 5:00 p.m. in the spring and fall. PG&E's systemwide peak electrical demand would occur in August, when the project's peak demand would be less than 2,200 kw. Peak day demand and annual electricity consumption curves for the project are given in Figure 33, p. 107.

The project would consume about 5.7 million cubic ft. (6.3 billion Btu) of natural gas annually, or about 524 million Btu per month./5/ Natural gas use would peak between 6:00 and 9:00 a.m. on January mornings as the hot water boilers begin heating the building. Peak day and annual natural gas consumption curves for the project are given in Figure 34, p. 108.

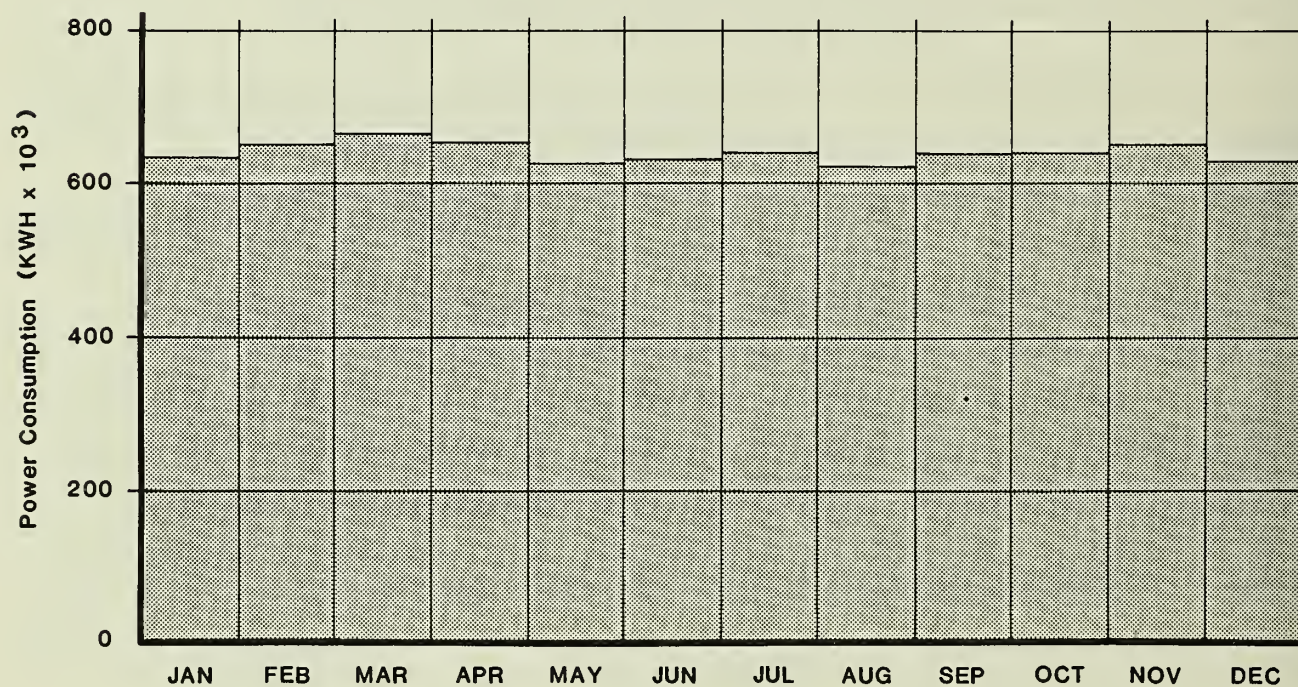
The project would consume a total of an estimated 84 billion Btu annually; its energy budget would be similar to that of other office projects proposed recently for downtown San Francisco. The project's estimated per-sq.-ft. electricity requirement, 1.8 kwh per month, would be higher than an average of the estimated per-sq.-ft. requirement of 1.4 kwh per month estimated for 16 other proposed projects (see Appendix F, p. 425). The project's estimated per-sq.-ft. natural gas requirement, 1,740 Btu per month, is less than 80% of an average per-sq.-ft. requirement of 2,200 Btu per month estimated for 16 other proposed projects. The project's estimated total annual per-sq.-ft. energy requirement, about 254,000 Btu, would be about 20% greater than the average of 212,000 Btu per month estimated for the other projects.

Several aspects of the project's energy system are not yet resolved, so a comparison of the project's energy budget with the building performance standards set by Title 24 of the California Administrative Code may be premature./6/ The project could comply with the requirements of Title 24 by meeting prescriptive standards for insulation, weather stripping, glazing





Daily Electrical Load Distribution (Peak Day)

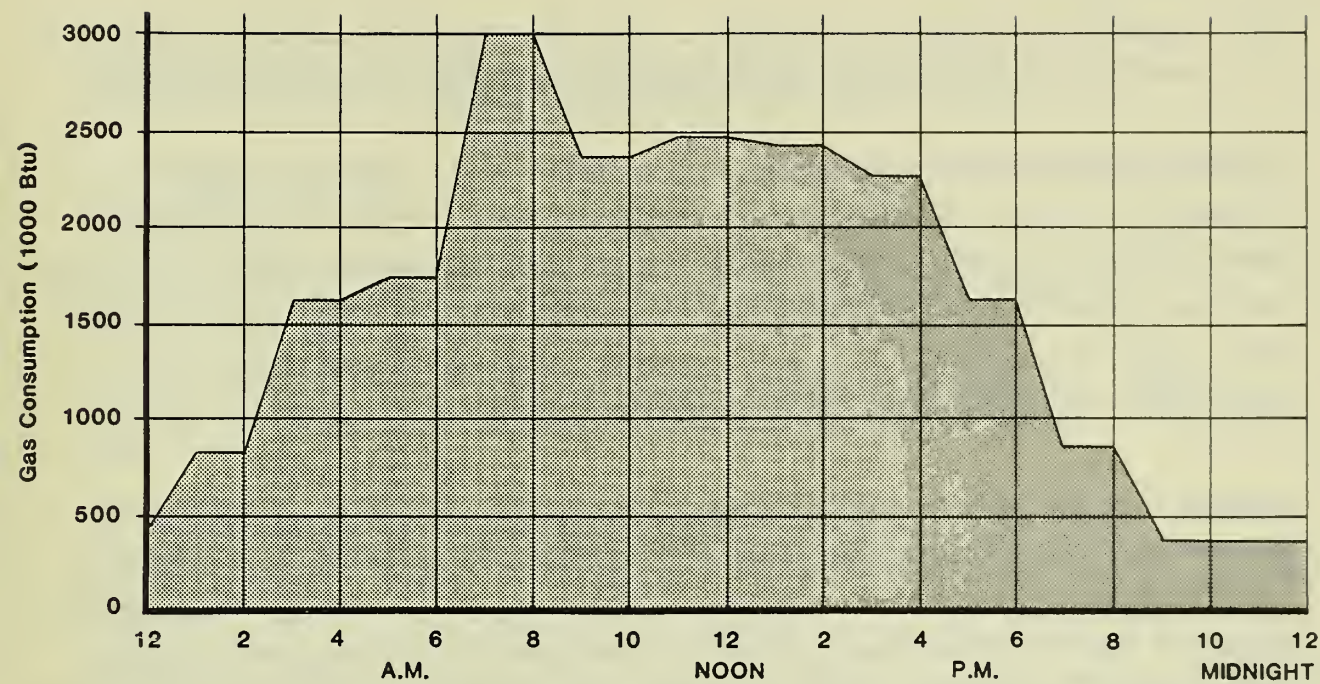


Annual Load Distribution

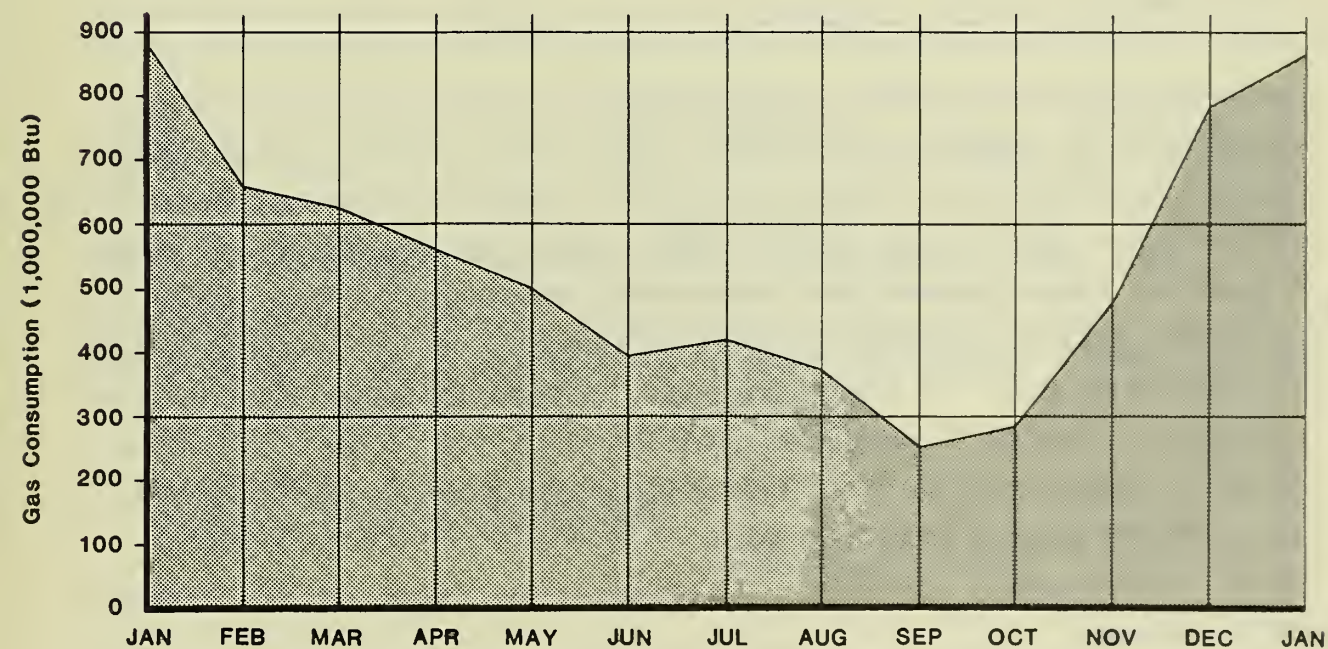
FIGURE 33: Projected Electrical Load Distribution Curves

SOURCE: Environmental Science Associates, Inc.





Peak Day Natural Gas Load Distribution Curve  
(Based on Jan 31 Design Day)



Annual Natural Gas Load Distribution Curve

FIGURE 34: Projected Natural Gas Load Distribution Curves

SOURCE: Environmental Science Associates Inc.

area, mechanical equipment efficiency, and other energy conservation measures; or by meeting the performance standard./7/

Project-related transportation would cause additional, offsite energy consumption. Based upon the project trips described in the Transportation Section, project-related trips would require about 189,000 gallons of gasoline and diesel fuel and about 438,000 kwh of electricity (transit) annually. The total annual transportation demand, converted using at-source factors to a common unit, would be about 31 billion Btu.

Shadows from the project would decrease passive solar heating of structures northerly of the project site, primarily the Chevron Building. In winter, from 70%-100% of the Chevron Building's 14,000 sq. ft. southerly facade would be shaded during midday hours, possibly increasing that structure's heating requirements. In summer, from 50%-100% of the Chevron Building's facade would be shaded during afternoon hours, possibly decreasing that building's cooling requirements. Net energy effects from project shading of adjacent structures are unknown.

The project and other office development under review, approved, or under construction in downtown San Francisco (16.1 million sq. ft.; see Appendix A, Table A-3, p. 402) would increase electricity consumption by about 260 million kilowatt-hours per year and would increase natural gas consumption by about 403 million cubic feet per year for building operations. Transportation associated with this cumulative office development would increase diesel fuel consumption by about 8.8 gallons per year, and would increase electricity consumption by about 52 million kilowatt-hours per year. The total increase in energy demand would be about five trillion Btu annually, equivalent to about 880,000 barrels of oil per year.

#### NOTES - Energy

/1/ The British thermal unit (Btu) is a unit of heat energy equivalent to the quantity of heat required to raise the temperature of one pound of water at sea-level one degree Fahrenheit. All Btu values given in this section are at-source values, meaning that they have been adjusted to include the energy required for generation and distribution, as specified in Energy Conservation



#### IV. Environmental Impact

and Design Manual for New Nonresidential Buildings, Energy Resource Conservation and Development Commission, 1977.

/2/ Hannon, B. et al., 1978, "Energy and Labor in the Construction Sector," Science 202: 837-847.

/3/ George Pavana, Pacific Gas and Electric Company, February 11, 1982, as reported to ESA by Dart Reinfort, Glumac and Associates, letter, February 16, 1982.

/4/ Gerald Tyson, Pacific Gas and Electric Company, February 11, 1982, as reported to ESA by Dart Reinfort, Glumac and Associates, letter, February 16, 1982.

/5/ No comprehensive building energy modeling was performed for the project. Natural gas and electricity loads for the project were estimated by the project engineers, Glumac and Associates, with data obtained from an existing building in San Francisco similar to the project in size, operating characteristics, mechanical equipment, and design features. These data were adjusted for differences in glass exposure, orientation and shading. Building occupancy was assumed to be 26 days per month; heating system efficiency was assumed to be 70%; lighting was estimated at two watts per sq. ft.; and wall receptacle loads were estimated at 0.5 watts per sq. ft.

/6/ California Energy Commission, 1980, Conservation Division Regulations Establishing Energy Conservation Standards for New Non-Residential Buildings.

/7/ Compliance with the Title 24 prescriptive standards is achieved by constructing the project in accordance with certain physical specifications such as for weatherstripping on doors and windows, and installing appliances and equipment that meet energy efficiency standards. Compliance with the performance standard is achieved by demonstrating that the building's annual energy consumption would not exceed the allowable annual energy budget specified by the California Energy Commission; the energy budget takes into consideration the mix of uses proposed, and is expressed in Btu per sq. ft. of conditioned floor area. Projects that meet the performance standard need not meet the prescriptive standard.

#### G. GEOLOGY, SEISMOLOGY AND HYDROLOGY

##### GEOLOGY

The entire site would be excavated following demolition of the existing buildings. The proposed structure would have a 12.5-ft.-deep basement and extend to the property lines. Excavation for the basement and foundation would extend several feet below the existing basement floors. The excavation would entail the removal of about 77,600 cubic ft. of soils and debris

#### IV. Environmental Impact

including all the unengineered fill and the upper portion of the wind-blown sand. The spoils would be hauled to a disposal site.

Because the sand lacks cohesiveness and is saturated at the depth of the excavation, it would have a tendency to collapse into the excavation pit if unsupported. The collapse of the pit wall could pose a hazard to construction workers in the pit and could undermine the support of the adjacent older structures, possibly resulting in damage such as cracked walls, foundations and basements; tilting of walls out of plumb; sagging of floors and bending of underground pipes. It could also result in damage to adjacent streets such as sagging and cracking of the pavement and sidewalks. During excavation and construction, pit walls would be shored and adjacent structures would be underpinned, if necessary. Dewatering would probably be required (see below - Hydrology). During construction, the building contractor would be required to comply with the San Francisco Building Code (Section 2903) and the Excavation Standards of the California Occupational Safety and Health Agency.

The site is in an area classified by the Community Safety Element of the Comprehensive Plan as a special geologic study area, because of potential ground failure hazards. Under Policy 4 of the Community Safety Element, the project sponsor would be required to conduct a geologic and soil engineering site investigation and comply with any compensating structural design recommendations based on the investigation's findings. The preliminary soils report indicates that the upper 30 ft. of soils at the site cannot support the anticipated major design loads of the structure if large, total differential settlements of the building's columns are to be avoided./1/ A deep foundation taking support in the geologic material below the Upper Bay mud (probably the dense sands below it would be suitable) would be required./1/ In compliance with Policy 4 cited above, further studies to establish the strength characteristics of the soils beneath the Upper Bay mud would be required. A driven pile foundation has been tentatively recommended; details regarding the depths to which the piles would be driven, and bearing capacities of individual piles, would be determined in future studies./1/ Vibrations generated by piledriving may damage nearby old building with shallow foundations. The extent of damage cannot be predicted as it depends on the



type and stability of each surrounding foundation and the method and duration of piledriving.

The proposed building loads would be supported by interior and perimeter columns. The interior columns would be located on column bays of about 30 ft. by 30 ft. and the perimeter columns would be located at 15-ft. intervals. The loads on these columns would be transmitted to the piles and would result in some settlement. The amount of settlement would be expected to be small (on the order of a few inches at most), depending on the design of the piles and the geologic material into which they are driven. Most of the settlement probably would occur in the first few years of the structure's existence. Studies would be undertaken to estimate the amount of settlement; design of the structure and its foundation would be based on these projections, in order to minimize the effects of the settlement on the building./1/ Such settlement would not likely affect any of the adjacent buildings in the site vicinity.

#### SEISMOLOGY

It is anticipated that at least one major earthquake and several moderate earthquakes would occur during the design life of the building. It must be assumed that the project site will be subject to appreciable shaking in a major earthquake.

The existing seismically substandard buildings on the site would be demolished and replaced by the proposed structures, which would be designed to meet modern seismic design standards of the San Francisco Building Code and the 1979 Uniform Building Code. The structural design of the building has not been determined; it would probably be a steel frame structure./1/ To meet current code requirements, the lateral force resisting system (that is, the structural system which would prevent the building from collapsing or toppling due to horizontal movements created by a major earthquake or strong winds) would have to resist collapse in a severe earthquake (design for about 8.0 Richter magnitude), although the frame could undergo severe damage. In a moderate earthquake (design for about 5.0 to 6.0 Richter magnitude), the structural damage would be minimized and a basically elastic behavior in all elements of the frame would be maintained. Studies would be conducted to

assess allowable lateral loads and seismic response of the site soils and structure./1/

The chief source of injury and damage within the proposed building during an earthquake would result from the fall of unattached objects and interior features such as bookcases, panel walls, light fixtures and hung ceiling panels. Some glass panels might collapse inward and injure people near the windows. Fires could be ignited within the building during an earthquake. It is possible that the Fire Department would not be able to respond to such a fire immediately and the sprinkler system might be inoperable if damage to the pipes or loss of pressure were to occur during the earthquake.

Under seismically induced building motions, some weakening of the bolts to the stone panels of the building's surface could occur. The hazard would be greatest for a major earthquake of long duration (on the order of about 10 seconds or more) which would induce building sway. With sufficient swaying motion, some panels could be damaged, causing chunks of stone to fall to the street. The swaying could also cause some glass panels to break loose and fall whole or in pieces. The falling debris would create a hazard to pedestrians on the sidewalks and streets and cause numerous injuries and death. Whole panels of glass create an additional hazard beyond the immediate building site because they tend to "float" while falling, that is, glide horizontally from side to side like a falling leaf. Some panels might float away from the building for several tens of feet depending on wind conditions and on the size, shape and weight of the glass.

There are no requirements in the San Francisco Building Code specifying the seismic response of window glass. The glazing, panels and exterior walls, as well as their connections, are considered to be part of, or an attachment to, the structure's exterior wall and are required to resist lateral loads, primarily related to wind shear but also to a major earthquake of 7.0 or greater magnitude, as specified in the Code.

It is likely that in a major earthquake many surface streets and freeways would be closed due to damage or debris blockage. Building occupants could be forced to remain in the building for an indeterminate period, perhaps up to



48 hours. The San Francisco Building Code requires that emergency water supplies be stored in the building and that a power generator be incorporated into the plans.

#### HYDROLOGY

During excavation and construction, dewatering of the site probably would be required as the excavation pit would extend below the water table. The extent of the dewatering requirements has not been estimated. Dewatering could create problems for adjacent buildings streets and utility lines. Major dewatering can produce settlement of soils in the site vicinity. Old buildings with shallow foundations could be damaged by differential settlement, resulting in cracked walls and floors, walls leaning out of plumb, floors tilting or sagging, and windows and doors that cannot be opened or closed. Streets could develop swales, cracks or "potholes." Underground utility lines may bend or break. Depending on the extent of dewatering, the Department of Public Works generally requires that a surety bond be posted before issuance of a permit for excavation. The construction contractor would be held responsible for any damage that might result from dewatering. An additional problem could arise from dewatering if any of the buildings in the area of drawdown of ground water are supported on wood pilings. Wood pilings, normally located in saturated soils, could be subjected to bacteria and rot if groundwater is removed and they are exposed to air in the soil. Rotting wood piles could result in a weakening of the overall support of the building foundation. It is not known if any buildings in the site vicinity obtain support from wood pilings.

The length of dewatering has not been estimated; it would be a temporary procedure. The site is located far enough away from the Bay that salt water intrusion would not likely result from dewatering. The temporary lowering of groundwater levels probably would not have a permanent impact on groundwater conditions in the vicinity. Past experience with dewatering in the South of Market area indicates that groundwater conditions would probably return to normal, following cessation of dewatering.

The project would not have any effect on runoff from the site, as the amount of impervious surface would not be changed. Increased vehicular traffic would result in increased deposits of oil, heavy metals, gasoline and other pollutants on City streets. These pollutants would enter the storm drain system and could eventually reach San Francisco Bay.

NOTE - Geology, Seismology and Hydrology

/1/ Lee and Praszker, Consulting Geotechnical Engineers and Geologists, January 29, 1982, Preliminary Geotechnical Investigation, Proposed Stevenson Street Office Building, San Francisco, California.

#### H. EMERGENCY RESPONSE PLAN

The Mayor's Office of Emergency Services (OES) is preparing an emergency response plan to be implemented in the event of an earthquake or other emergency. The plan will identify roles and responsibilities of government agencies which would be involved in the event of a city emergency./1/ Included in this plan are a series of casualty and mass care centers that have been established on a district basis and would provide first aid and essential social services to injured and displaced persons (see Appendix G, p. 426, for a list of these facilities).

Cumulative highrise development proposed for the downtown area would increase the number of persons working downtown. This would result in a greater demand for medical care and social services in the area if a disaster were to occur during working hours. In addition, street congestion would probably intensify due to the increased number of people concentrated in the Financial District. This would interfere with the prompt response of emergency vehicles due to route delays and detours caused by crowded streets.

The effectiveness of the City's emergency response plan would therefore depend, in part, on an informed public's ability to know what to do and where to go in the event of an emergency.

The Office of Environmental Review (OER) and the Mayor's Office of Emergency Services (OES) have developed a measure which recommends that project sponsors



or building management staff develop evacuation and emergency response plans for all new high-rise buildings. OES would review the plans to ensure coordination with the City plan. An emergency response plan is proposed as part of the project, and this plan would be subject to review by OES.

#### NOTE - Emergency Response Plan

/1/ Tom Jenkin, Architect, Mayor's Office of Emergency Services, telephone conversation, January 12, 1982.

#### I. GROWTH INDUCEMENT

The project would add about 324,640 gross sq. ft. of office space and about 9,220 sq. ft. of retail space and would remove about 20,770 gross sq. ft. of warehouse space and about 300 parking spaces from the South of Market area. Employment at the site would increase by about 1,330. Occupants of the proposed project are unknown, but could include tenants from other San Francisco locations, tenants who could relocate from outside San Francisco, and firms new to the Bay Area. The increase in employment at the project site, therefore, would not necessarily represent employment that is new to San Francisco. If the project is fully leased, however, and the availability of its space does not create permanent vacancies in other San Francisco office buildings, total employment in San Francisco would eventually increase by about 1,335 jobs due to the project.

This growth would be in response to the increasing demand for office space located in San Francisco's Financial District. This demand would exist whether or not the proposed project is built. The demand for office space continues the trend of growth in service sector and headquarters office activities and employment. The increase in downtown office space and employment would contribute to the continued growth of local and regional markets for housing goods and services.

It is expected that many downtown workers would want to live in San Francisco. Employment growth, however, would not correspond directly to increases in demand for housing and city services to residents, as some new

#### IV. Environmental Impact

jobs would be held by individuals who already live and work in the City; or who live in the City but who previously either did not work, or worked outside the City, or who live in surrounding communities.

Any net increase in employment downtown would increase the demand for retail goods and food services in the area. The project would intensify this demand, which would be met, in part, by retail space proposed to be incorporated in the ground floor of the project.

Increases in employment downtown would also increase demand for business services, to the extent that the expanded space would not be occupied by firms providing those services. In response, demand would increase for existing space and possibly for further new development. No expansion to the municipal infrastructure not already under consideration would be required to accommodate new development and increased employment due to, or induced by, the project.



V. MITIGATION MEASURES PROPOSED TO MINIMIZE THE ADVERSE EFFECT OF THE PROJECT

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Mitigation Measures currently proposed as part of the project, under consideration or rejected by the project sponsor are listed below. Where a measure has been rejected, the sponsor's reasons for rejection are given. Mitigation Measures listed in the initial study are included in this section.

URBAN DESIGN

MEASURES PROPOSED AS PART OF THE PROJECT

- To enhance the pedestrian environment, the project sponsor would provide landscaped plazas and a retail arcade that would facilitate pedestrian access through the project site (no pedestrian amenities currently exist on the project site).
- The curved form of the building would permit more sunlight on the Chevron Garden Plaza than would a rectangular building form; the top of the building would have a stepped-down configuration in accordance with Guiding Downtown Development.

CULTURAL

MEASURE PROPOSED AS PART OF THE PROJECT

- Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board would be notified. The project sponsor would select an archaeologist or other expert to help the Office of Environmental Review determine the significance of the find and whether feasible measures, including appropriate security measures, could be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation

## V. Mitigation Measures

measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.

- The project sponsor would photographically record, according to National Architectural and Engineering Standards, all buildings on the project site rated by Heritage.

### HOUSING

#### MEASURES PROPOSED AS PART OF THE PROJECT

- On January 27, 1982, the project sponsor entered into an agreement with the City and County of San Francisco to provide housing units or the equivalent (under the OHPP Guidelines) for 265 of the 289 units, according to the OHPP formula, which would be required by City Planning Commission policy as a condition of project approval. The project sponsor would make other arrangements to provide the additional 24 units or the equivalent (under the OHPP Guidelines).

### TRANSPORTATION

#### MEASURES PROPOSED AS PART OF THE PROJECT

- A transportation broker would be designated to develop and implement a transportation management program.
- The project sponsor has agreed to contribute funds for maintaining and augmenting transportation service, in an amount proportionate to demand created by the project, as provided by Board of Supervisors Ordinance No. 224-81 or any subsequent equitable funding mechanism developed by the City.
- The project sponsor would encourage transit use by providing for on-site sale of BART tickets, Muni, and Golden Gate Transit passes.



## V. Mitigation Measures

- The project sponsor would encourage a tenant carpool/vanpool system by providing a central clearing house for carpool information in cooperation with Rides for Bay Area Commuters.
- The project sponsor would provide secure and safe bicycle parking, one space for handicapped parking, and handicapped access facilities relative to the demand generated by project users.
- The project sponsor would encourage tenants of the project to practice flex-time for their employees to reduce the peak demand on roads, bridges and transit systems.
- Within a year of full occupancy of the project, the project sponsor would conduct a survey, in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants and actual pick-up and drop-off areas for car pools and van pools. The project sponsor would make this survey available to the Department. Alternatively at the request of the Department, the sponsor would provide a fair and equitable in lieu contribution toward an overall transportation survey for the downtown area to be conducted by the City.

## AIR QUALITY/CLIMATE

### MEASURES PROPOSED AS PART OF THE PROJECT

- During excavation, unpaved demolition and construction areas would be wetted twice a day to hold down dust; if this were done at least twice a day with complete coverage, particulate emissions (dust) would be reduced about 50%.
- The general contractor would use water-based or latex paint on all interior drywalls painted rather than oil-based paints which emit hydrocarbons while drying. This would reduce hydrocarbons from drying paint by about 60 percent.

## V. Mitigation Measures

- The general contractor would maintain and operate construction equipment so as to minimize exhaust emissions.
- During construction, drivers of trucks in loading or unloading queues would turn off their engines to reduce vehicle emissions.

### CONSTRUCTION NOISE

#### MEASURES PROPOSED AS PART OF THE PROJECT

- The project contractor would muffle and shield intakes and exhausts, shroud or shield impact tools, and use electric-powered rather than diesel-powered construction equipment, if possible.
- The project sponsor and project contractor would meet with the Bureau of Engineering to determine necessary and feasible measures to reduce noise during the period that piledriving would occur, including the predrilling of holes for piles to the maximum feasible distance to minimize piledriving activity.
- The project contractor would limit piledriving to the hours resulting in the least disturbance to the greatest number of neighboring uses.

#### MEASURES UNDER CONSIDERATION

- The project sponsor could notify Golden Gate University of piledriving to aid the University in scheduling no classes in classrooms fronting Jessie St. during piledriving hours.

#### MEASURES REJECTED BY THE PROJECT SPONSOR

- The project contractor would construct acoustical sound barriers over north windows of classrooms of Golden Gate University.



ENERGY

MEASURES PROPOSED AS PART OF THE PROJECT

- Wherever possible, office suites would be equipped with individual light switches, fluorescent lights and other energy-saving devices as appropriate to conserve electric energy.
- Building heating, ventilation and air-conditioning (HVAC) systems would be maintained by the building management at the lowest rates consistent with code requirements and industry standards to reduce heating and cooling loads.
- Electricity would be distributed within the building at 480/277 volts and stepped down with dry transformers where necessary for 110-volt outlets. Installed lighting would operate primarily at 277 volts. These measures would reduce distribution losses and increase efficiency of energy use.
- The building envelope would be designed to reduce energy consumption by minimizing solar heat gain while maximizing daylighting.

MEASURES UNDER CONSIDERATION

- The project sponsor could install an active solar water heating system to reduce natural gas consumption.
- Elevators could use solid-state motor controllers to conserve energy when elevators are at rest.
- The project sponsor and project engineer could meet with the Energy Conservation Department of the PUC to discuss measures that could be taken to conserve energy.
- Within 18 months of full occupancy, the building operator could provide the Department of City Planning with monthly natural gas and electricity consumption data for a 12-month period. If this data were to indicate

that energy consumption exceeded the applicable state standards, the building operator could have the building's energy performance audited by PG&E or another certified contractor, and could implement all recommended energy conservation measures having a payback period of 10 years or less. Results of the audit could be available to the City.

### MEASURES REJECTED BY THE PROJECT SPONSOR

- The project sponsor has rejected using PG&E's steam heating district because of its high project sponsor operating costs compared to those of natural gas heating.
- The project sponsor has rejected the use of operable windows because they allow high air infiltration rates that increase heating and cooling loads, and because of the lack of adequate particulate filtration with this type of ventilation.

### GEOLOGY, SEISMOLOGY AND HYDROLOGY

#### MEASURES PROPOSED AS PART OF THE PROJECT

- A detailed foundation and geotechnical study would be conducted for the building by a licensed foundation and geotechnical consultant. The project sponsor would follow the recommendations of this study during the final design and construction of the project.
- During construction, the project contractor would sweep streets to prevent siltation of storm drains.
- The project sponsor would have a dynamic analysis of the proposed structure prepared to ensure that the structure would be able to resist the lateral forces induced by a major earthquake.
- Windows would be installed so as to minimize the possibility of breakage during an earthquake, and to maximize the possibility that glass would fall inward, rather than outward, should windows break.



## V. Mitigation Measures

- If dewatering were necessary, groundwater observation wells would be installed by the contractor to monitor the level of the water table and other instruments would be used to monitor potential settlement and subsidence. If, in the judgement of the City engineers, unacceptable subsistence occurs during construction, groundwater recharge would be begun to halt settlement. This might cause a delay in construction.
- Nonstructural elements of the building, such as hanging light fixtures, bookcases, ceiling and wall partitions, and mechanical equipment would be attached firmly in a manner to reduce the likelihood of their falling during an earthquake.

### MEASURES UNDER CONSIDERATION

- A survey of surrounding buildings could be conducted to determine if any of them are supported by wood pilings or have foundations subject to damage by differential settlement which might result from dewatering. Should dewatering be necessary, subsidence in surrounding buildings and streets could be monitored by the project sponsor to insure that damage is kept to a minimum. Dewatering could cease should excessive subsidence occur. If damage were severe the sponsor could be required, by the Department of Public Works, to pump the water back into the ground to stabilize the subsidence. If adjacent structures are supported on wet wood piles, a method could be devised to keep the piles moist during construction.
- The project sponsor could prepare an information packet for tenants including directions for occupants' activities in an earthquake and recommendations for reducing the hazards of falling objects (such as ways to secure bookcases and panels so they do not topple over).

EMERGENCY RESPONSE PLAN

MEASURES PROPOSED AS PART OF THE PROJECT

- An evacuation and emergency response plan would be developed by project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to ensure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project's plan would be reviewed by the Office of Emergency Services and implemented by building management before issuance by the Department of Public Works of final building permits.
- To expedite implementation of the City's emergency response plan, the project sponsor would provide information to building occupants concerning what to do in the event of a disaster.

UTILITIES AND PUBLIC SERVICES

MEASURES PROPOSED AS PART OF THE PROJECT

- To reduce the demand on police protection services, the project would incorporate internal security measures which might include such features as a 24-hour staffed guard station in the lobby area, closed circuit television cameras and internal security personnel, and well-lighted entries.
- The project sponsor would provide new project tenants with a fire and earthquake safety orientation program and evacuation plan.



## VI. Significant Environmental Effects

### VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

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#### URBAN DESIGN

Portions of the Chevron Garden Plaza and the Tishman Building Plaza that are unshaded under existing conditions would be shaded by the project for limited periods. The most extensive new shadows would occur in March/September in the morning hours.

#### TRANSPORTATION

The project would add directly about 315 person-trips on the Muni system during the p.m. peak hour. The project would generate a demand for about 420 long-term parking spaces and 80 short-term spaces; an additional demand for a maximum of about 300 parking spaces would be created by the demolition of the existing parking garage.

#### CUMULATIVE OFFICE DEVELOPMENT

The project would be part of a trend of a denser development in Downtown San Francisco. Cumulative increases in the amount of office space would continue regional growth in service-sector and office headquarters activities and employment. The project would contribute to cumulative traffic increases Downtown and cumulative increases in passenger loadings on BART, Muni and other transit agencies, and cumulative pedestrian circulation within the vicinity of the project site.

VII. ALTERNATIVES

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A. NO PROJECT

This alternative would entail no physical change to the site as it now exists. The parking garage and warehouse would remain, presumably in the same conditions that exist in 1982.

In general, the environmental characteristics of this alternative would remain substantially as described in Section III. of this report. Present levels of traffic, parking demand, transit demand, air pollution, noise, energy consumption, on-site employment, and shadow and visual effects now attributable to the buildings on the site would continue to exist.

- The effects identified in Section IV, Environmental Impacts, of this report, including increased employment, new housing demand, creation of additional revenues to the City and creation of an increased subsidy for Muni, increases in vehicle and pedestrian traffic, transit ridership and parking demand, construction noise impacts and increased energy use would not occur. In addition, increased shadows attributable to the project, shown in Figures 18-29, would not occur. Further, 300 spaces of off-street parking would not be lost.

This alternative would leave the site open for development proposals at a similar or lesser density at a later date.

The sponsor has rejected this alternative because it would not fully use the potential usable space allowed at the site and would not provide a reasonable return on the investment potential of the site.

B. NO PARKING ON SITE

Under this alternative, no provision would be made for on-site parking, in conformance to the Transportation Element of the Comprehensive Plan, which



recommends that no new long-term parking be created in the Core area of downtown, in which the site is located. The proposed project would include 34 parking spaces. In all other respects this alternative would be the same as the proposed project.

The depth of excavation would be less than with the project as proposed; a small amount of ground floor area now proposed as a ramp would be available for other uses, possibly retail. Transit demand could be increased minimally by the lack of on-site parking and circulation and air quality effects in the immediate vicinity would be reduced. Other effects of this alternative would be the same as with the proposed project.

This alternative would not have a curb cut or parking entrance on Stevenson St. Project-related traffic on Stevenson St. would be reduced by the number of vehicles projected to use the garage (a maximum of 20 during the p.m. peak hour) and auto emissions on Stevenson St. would also be reduced (these emissions would occur instead in areas where drivers expected to find parking). The number of pedestrian/vehicle and vehicle/vehicle conflicts would be reduced. The total parking demand related to the project would not change; parkers from the project would compete with other parkers for spaces, resulting in some displacement. The net parking-related effect of no on-site parking, in conjunction with the projected lack, after cumulative development, of adequate parking for drivers with destinations downtown, would be to increase the number of persons using transit.

The sponsor has rejected this alternative because the sponsor believes some tenants of the building would need ready access to their automobiles for their businesses; for this reason, on-site parking enhances the marketability of the project space.

### C. OFFICE PROJECT CONFORMING TO GUIDING DOWNTOWN DEVELOPMENT

Guiding Downtown Development (GDD), proposed controls developed by the Planning Department and published in July 1982, would change the allowable

base FAR for the site to 12:1, and the height limit to 700 ft. Retail space of not more than 2,000 sq. ft. would not be counted against the FAR. GDD recommends the provision of one sq. ft. of public open space or recreational area for every 25 sq. ft. of building area. GDD bulk limits result in stepped buildings, with top floors limited to 8,100 sq. ft. of floor area, and a maximum base dimension of 200 ft. GDD further recommends the provision of publicly accessible art work at the ground level, equal in value to one percent of the construction cost of a new building.

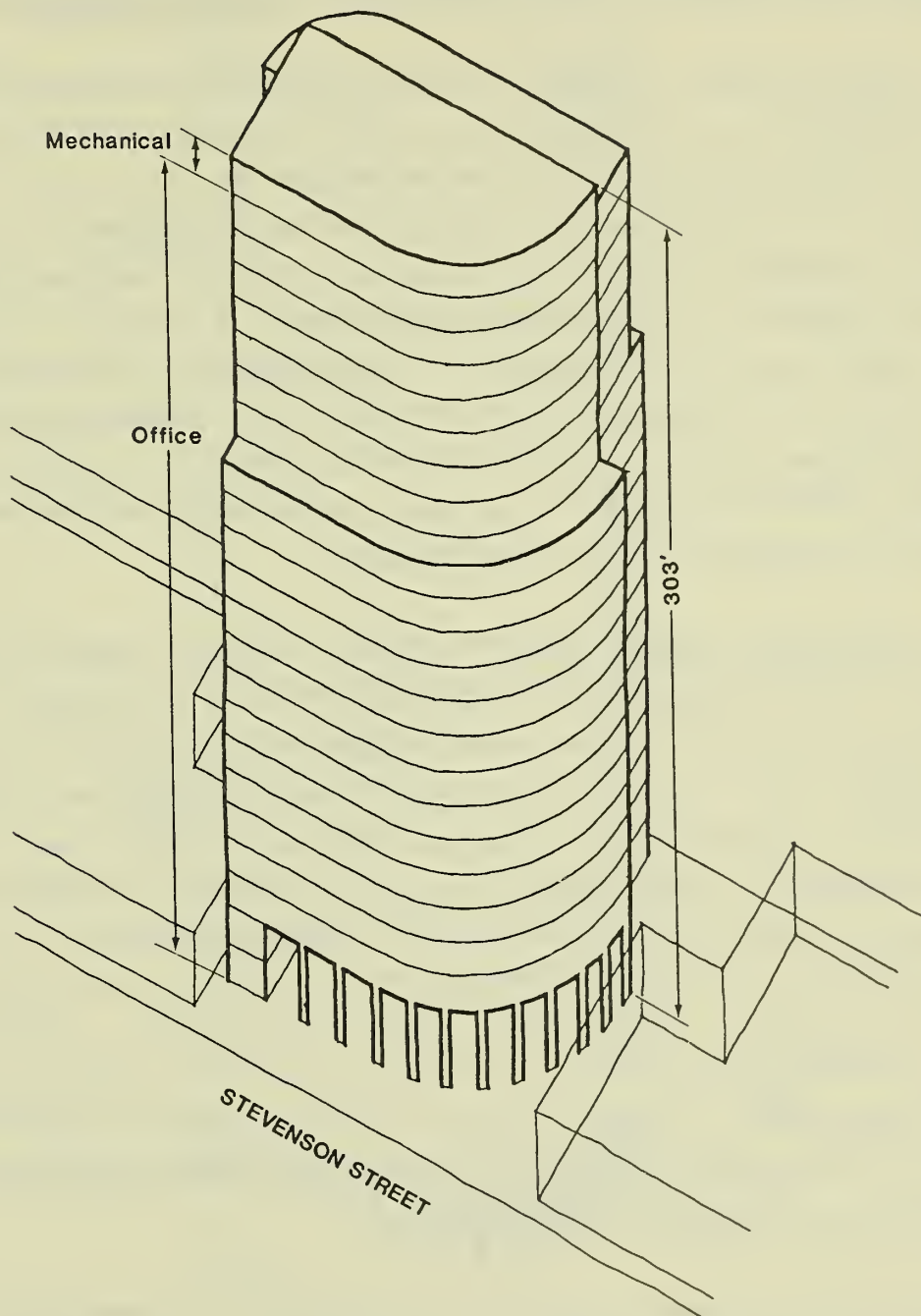
This alternative would have 296,520 sq. ft. for a total FAR of 12:1 (35,440 sq. ft. less than the currently allowable floor area for the site), and 900 persons would be employed in the project (425 fewer than with the project). This alternative would be 23 stories (including a mechanical penthouse) and 303 ft. in height. The building would have a tapered design, in accordance with recommendations in GDD (see Figure 35, p. 130). Open space of 11,860 sq. ft. would be required; 17,700 sq. ft. would be provided in a ground level plaza of about 14,000 sq. ft. and sun and view terraces of about 3,700 sq. ft.

About 141,800 sq. ft. of housing in 246 units would be required housing for this alternative under the recommendations contained in GDD (640 sq. ft. and 0.9 units of housing per 1,000 gross sq. ft. of office area). This housing would be provided off site.

- The width and length of shadows would be slightly reduced with this alternative because the tower would be somewhat narrower at upper stories and shorter than the project. Transportation effects and energy consumption would be about 12% less than with the project. No parking would be provided on the site under this alternative, with effects similar to those of the No-Parking Alternative. Three loading docks would be provided, as with the project.

The sponsor has rejected this alternative because it would not maximize the allowable developable area under existing controls and because, in the sponsor's opinion, the proposed project already incorporates several of the recommendations in GDD, including a stepped building form and publicly accessible open space.





SOURCE: Gensler & Associates, Architects

FIGURE 35: Alternative C –  
GDD Office Building

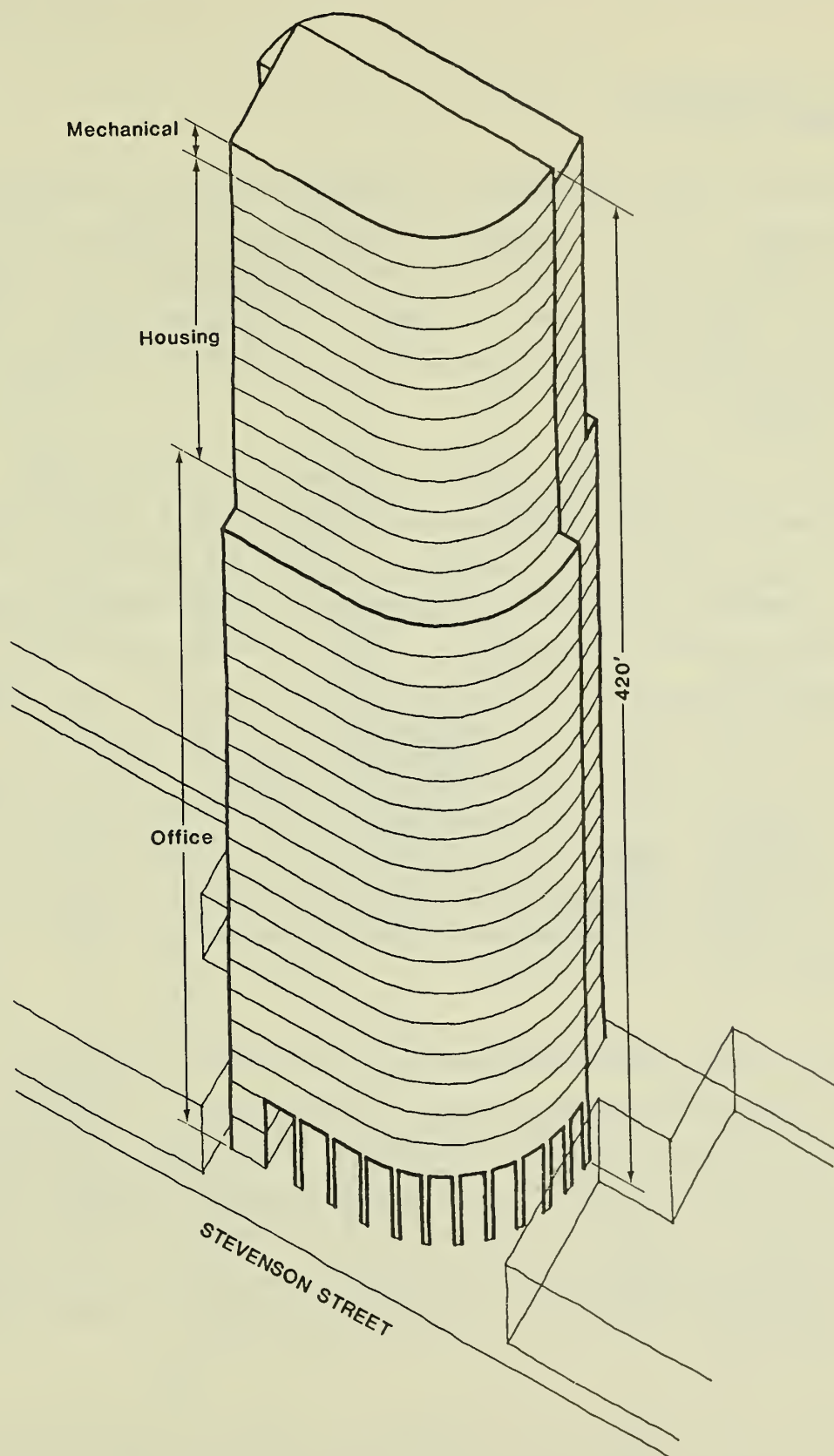
D. MIXED OFFICE/HOUSING PROJECT CONFORMING TO GUIDING DOWNTOWN DEVELOPMENT

Under this alternative, the building would contain the maximum allowable floor area of 420,070 sq. ft., based on 12:1 for office space (296,520 sq. ft.) and 5:1 for housing (123,550 sq. ft), as recommended by GDD for the C-3-0 Use District. The building would be 420 ft. tall with 21 floors of office, 10 floors of housing (112 units) and a mechanical floor. Required open space would be 16,800 sq. ft., which would be provided in a ground floor plaza of about 14,000 sq. ft. and balconies for the residential units equal to 3,700 sq. ft. which could be used to meet the open space recommendation for the entire building. The building form would be tapered in accordance with bulk controls in GDD (see Figure 36, p. 132). Twenty-eight parking spaces would be provided for residential use in the basement.

Project employment would be about 1,200 jobs, 125 fewer than with the project. On the assumption of 1.8 persons per unit, 202 persons would reside in the housing units. Shadows would be about 30% longer than with the project as proposed. The 28 parking spaces would result in additional traffic on Stevenson St. and other local streets. This traffic would lower levels of service slightly on local streets, but trip distribution patterns would not correspond to peak-hour commuter traffic. Pedestrian/vehicle and vehicle/vehicle conflicts on Stevenson St. at Ecker St. and at First and Second Sts. would be more frequent than with the project. Transportation effects related to the office use on the site would be reduced by about 10% from project levels. Energy use would increase by about 13 billion Btu annually. Construction noise effects would last longer because the construction period would be extended.

The sponsor has rejected this alternative because the marketability of housing in this area has not been demonstrated; because the area of office use would not be the maximum currently allowed under existing controls, and supportable by demand; and because of the reduced efficiency of office floors which would result. An additional bank of elevators would be needed to serve residential floors, which would reduce the amount of usable floor space on the office floors. Area devoted to elevators is included in Floor Area Ratio calculations, and so the lost area could not be made up elsewhere.





SOURCE: Gensler & Associates, Architects

FIGURE 36: Alternative D –  
GDD Office/Housing Building

E. DESIGN ALTERNATIVE

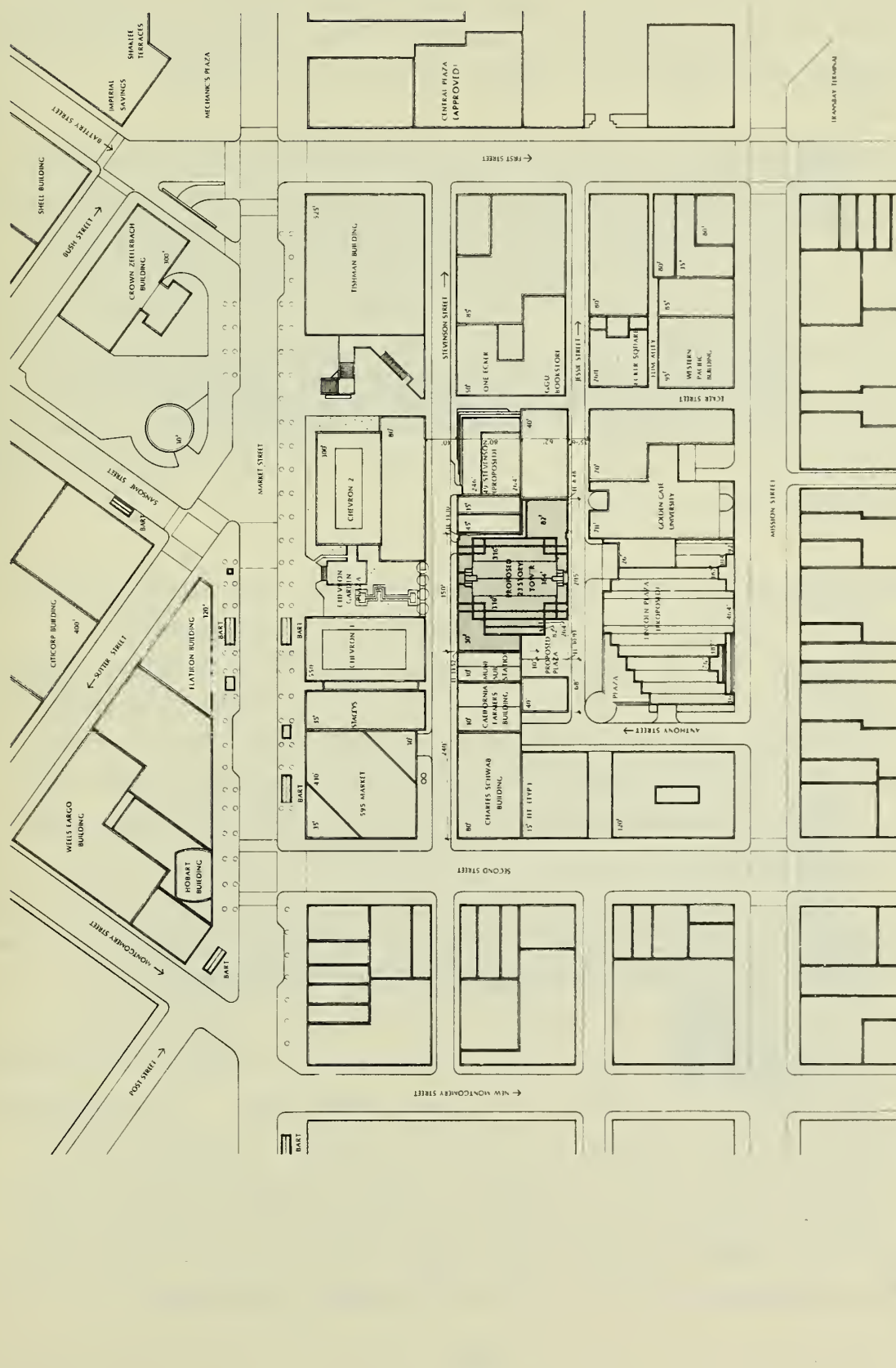
This building scheme, Alternative E, is being offered as a design alternative to the project. It is in response to comments made by members of the City Planning Commission, the staff of the Planning Department and the public, on the current project design and its impacts. The design attempts to minimize the impacts that the height and bulk of a new highrise can have on surrounding buildings and public spaces.

In addition to the specific impacts associated with the design of Alternative E, the wind analysis on pp. 161-181 reflects impacts attributable to the Lincoln Plaza project proposed at Anthony and Mission Sts., and the project proposed at 49 Stevenson St. to provide a site-specific examination of the combined effects concentrated on a heavily pedestrian-oriented block. The 49 Stevenson St. project is still in preliminary stages of Department review; the project has undergone several revisions since the Department accepted the request for environmental analysis. The wind impact analysis included the bulk configuration of the 49 Stevenson St. project that was current at the time to provide a general picture of the effects a project on that site would have. More specific impacts of the project, at the point when the project's design and bulk are better defined, would be discussed in its environmental evaluation.

Figure 37, p. 134, shows the Alternative E site plan in the context of its setting, including buildings proposed at 49 Stevenson St. and at Mission and Anthony Sts. (Lincoln Plaza). Alternative E would have 23 stories, a mezzanine and roof-top penthouse containing mechanical equipment, and a basement level. The building would be 316 ft. tall to the top floor. The mechanical penthouse would step in from the 23rd floor; at this level the building would be 335 ft. tall. The narrow, ornamental pitched roof would be about 35 ft. tall.

While the overall height of the alternative would exceed the height of the project at 324 ft., the bulk would be substantially reduced. The massing of the alternative has been concentrated towards the eastern portion of the site in order to maximize daylight and sky visible from the Sansome St. view





**SOURCE:** Kaplan/McLaughlin/Diaz

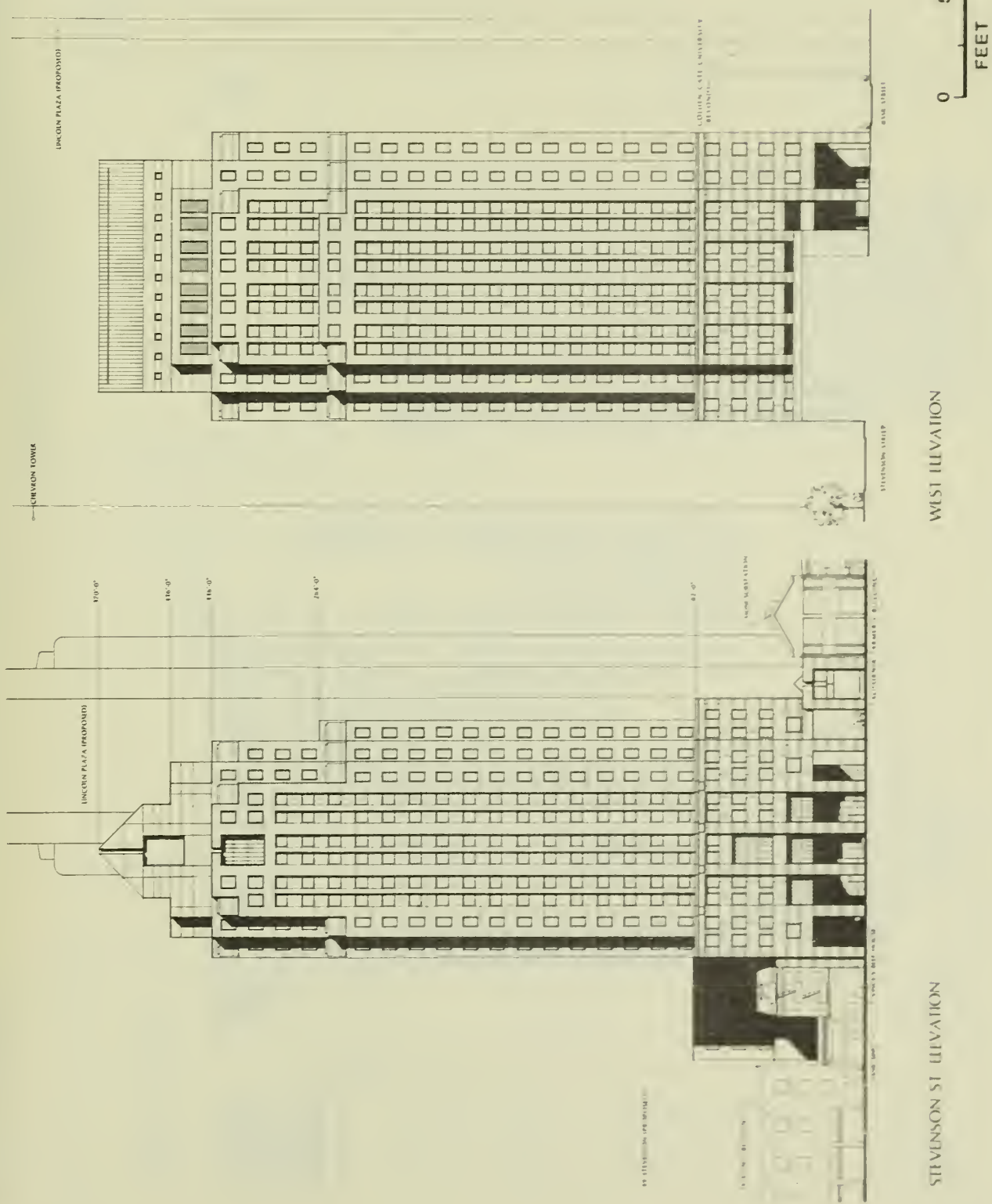
corridor. The scheme incorporates a stepped form resulting from a transfer of bulk to the lower part of the building, creating a slimmer tower than that of the project, while maintaining the street level public amenities in the form of an arcade and plaza, responding to policies of the Comprehensive Plan and Guiding Downtown Development (see Figures 38 and 39, pp. 136-137).

The building would consist of three separate building sections (base, middle and top). The base element, consisting of the first five stories, would have a height of 82 ft., and would be faced in granite, marble, or shaped precast concrete. The middle section, floors six through 19, would consist of rectangular inset window openings on a precast-concrete-clad surface. The top section (floors 20 through 23) would be set off from the middle section by a series of horizontal setbacks above the 19th floor. Facade materials have not been determined for this section of the building. The tower would be built to lot lines on Stevenson St. above the second floor. The color of the building has not been determined, but would be light.

The ground floor would contain about 3,000 sq. ft. of retail sales area, the building lobby, a security desk, and the loading area (see Figure 40, p. 138). A covered walkway through the ground floor, lined by retail shops, would connect the building's Stevenson and Jessie St. entrances and allow mid-block pedestrian passage (see Figure 41, p. 139). The retail spaces on the southern side of the site would be accessible from both the arcade and Jessie St. Retail uses could consist of restaurants, print shops and other office-related services.

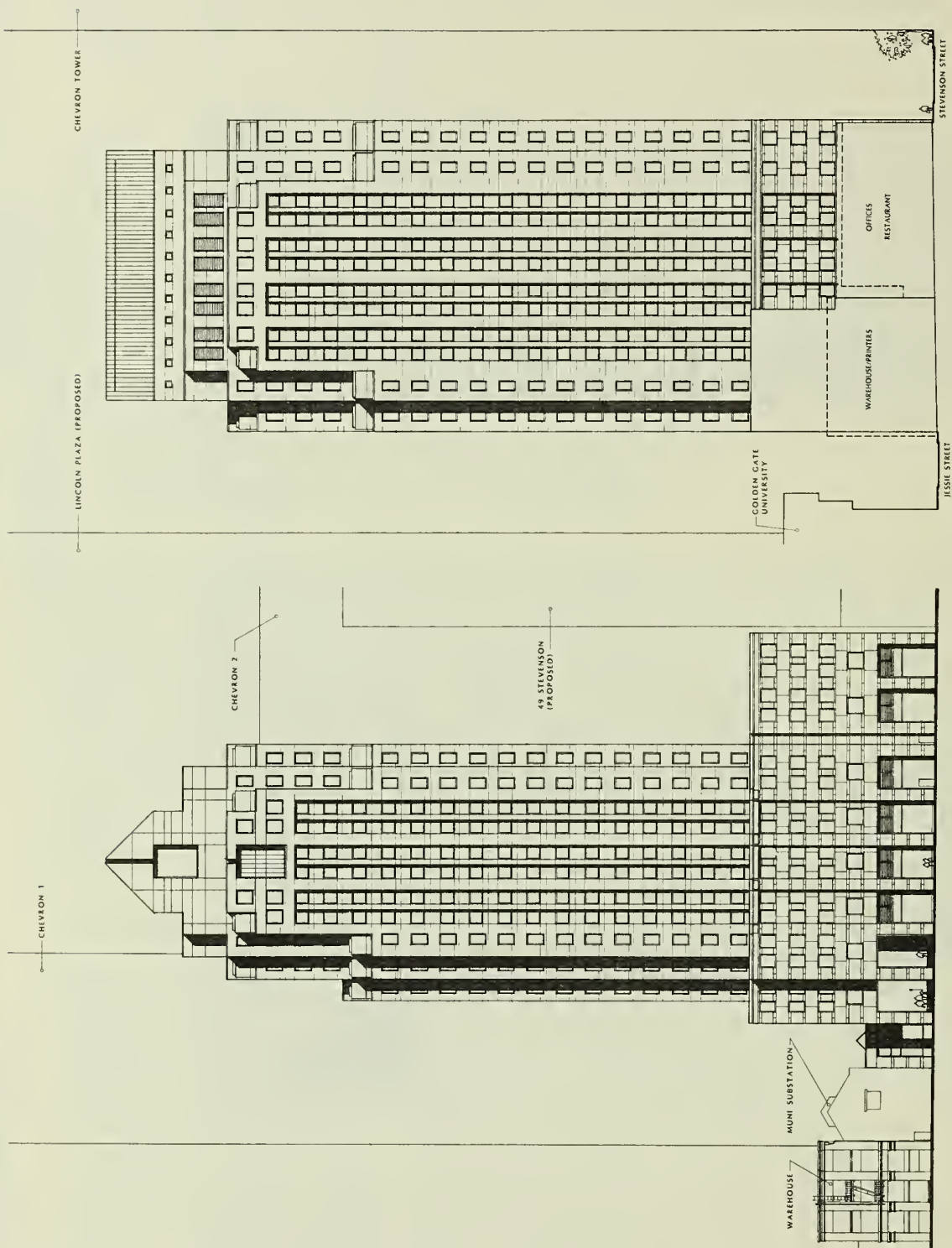
The Stevenson St. entrance would be defined by a loggia (a roofed gallery open to the street). The Jessie St. entrance would open onto a plaza. The Department of City Planning has requested that Jessie St. between the 71 Stevenson St. site and the Lincoln Plaza site be paved in conjunction with the plazas of the respective buildings, to form one large plaza. The plaza would be formed by collectively paving with identical material a portion of the project site facing Jessie St., a portion of Jessie St. and a portion of the Lincoln Plaza site opposite the project site on Jessie St. Because of its location at the southwest corner of the project site, the plaza would receive mid-day sun to encourage day use by the local employee and student





● FIGURE 38: Alternative E - Stevenson St. and West Elevations

SOURCE: Kaplan/McLaughlin/Diaz



JESSIE ST. ELEVATION

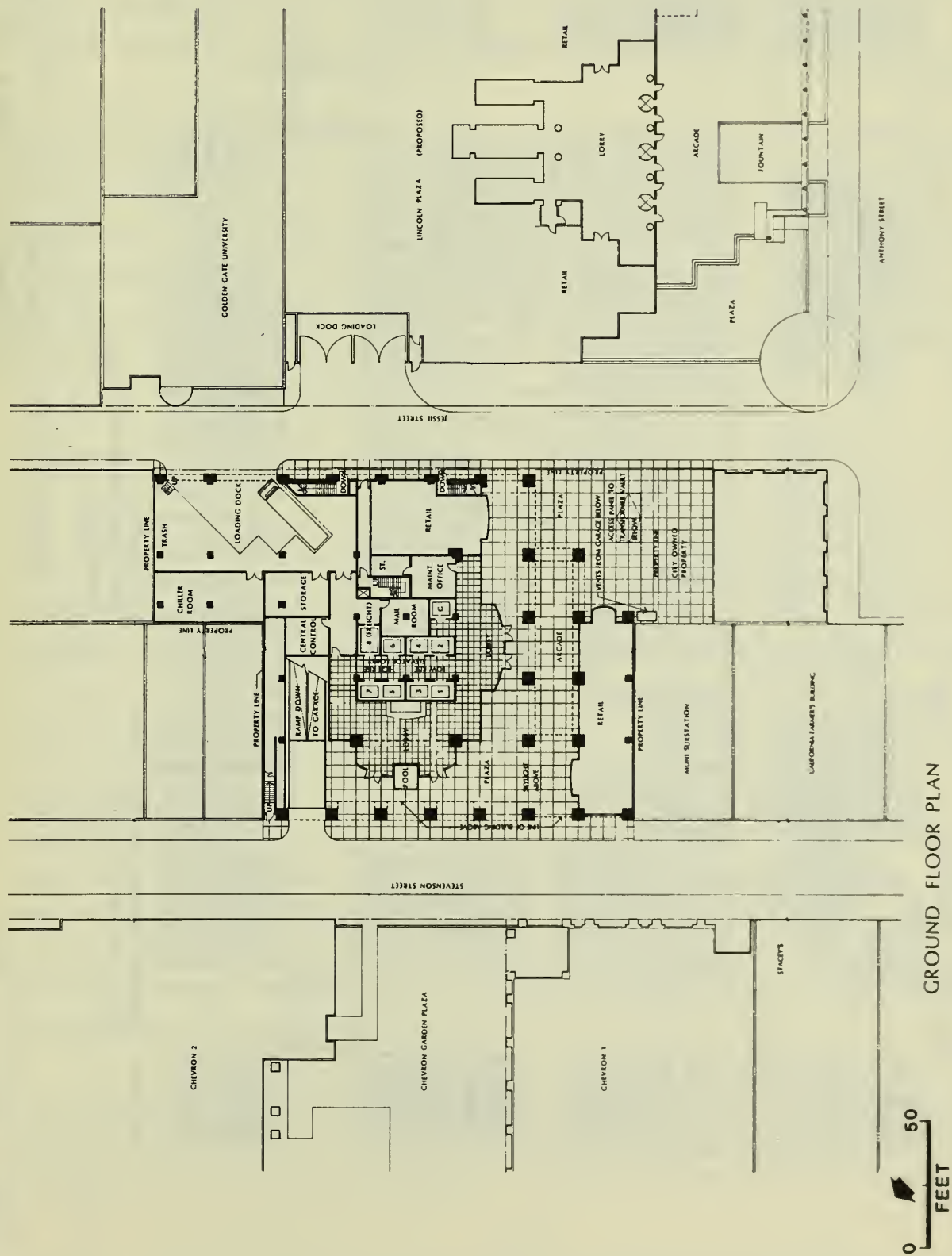
EAST ELEVATION

0 50  
FEET

● FIGURE 39: Alternative E -  
Jessie St. and East Elevations

SOURCE: Kaplan/McLaughlin/Diaz

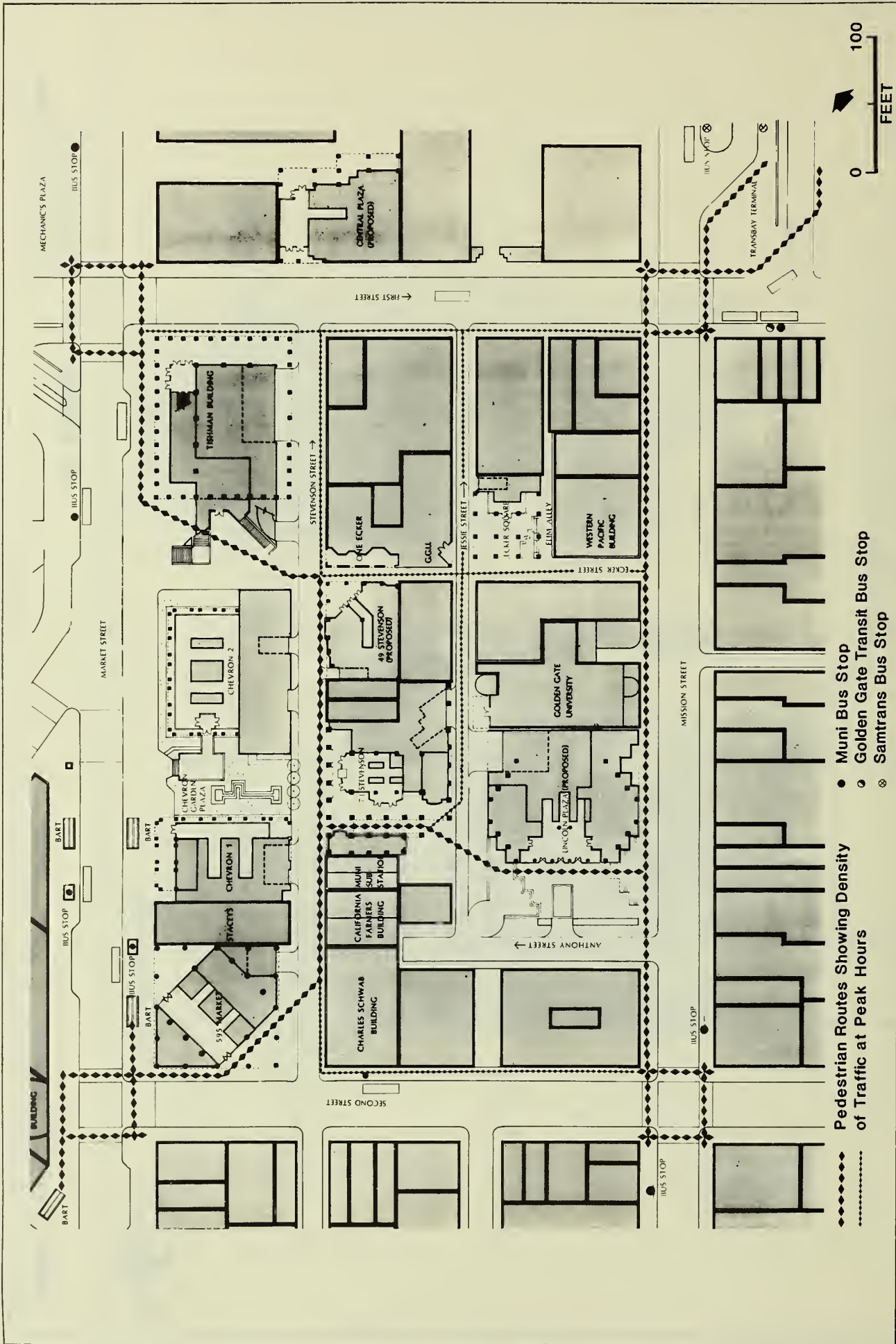




GROUND FLOOR PLAN

● FIGURE 40: Alternative E - Ground Floor Plan

SOURCE: Kaplan/McLaughlin/Diaz



● FIGURE 41: Pedestrian Routes- Alternative E,  
Including Lincoln Plaza and 49 Stevenson

SOURCE: Kaplan/McLaughlin/Diaz



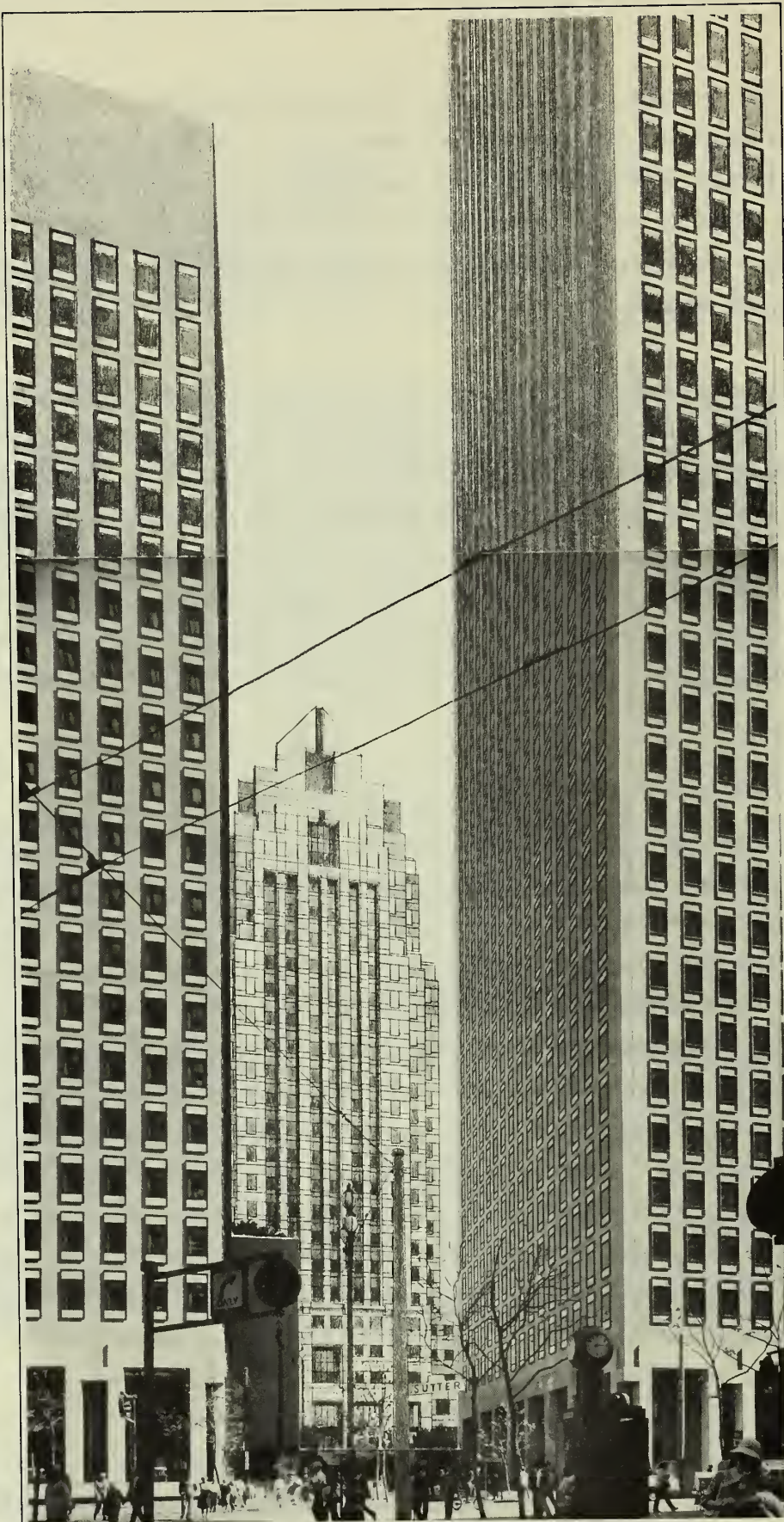
population. The sponsor would also pave the Muni Substation driveway adjacent to the site, subject to the approval of the City. Paving of Jessie St. and the Muni Substation driveway would not include any relinquishment of control, ownership, or right of way of these areas by the City to the sponsors. Both would continue in their present function and no interference with their current use would result.

Three loading docks would be provided, as with the project. Access to the loading bays would be from Jessie St. Access to the basement parking would be from Stevenson St.; about 75 spaces of attended parking would be provided, compared to 34 self-park spaces in the project. The largest floors would contain about 19,000 sq. ft. of space (including elevators, restrooms and corridors). The smallest office floor would contain about 13,000 sq. ft. The building, containing a total of 345,850 gross sq. ft. of floor area (335,450 sq. ft. of office area), would have a Floor Area Ratio (FAR) of 14:1.

### URBAN DESIGN

The design of the tower as proposed would be composed of distinct geometric forms and facade treatments; the three separate building sections would be tapered towards the building's roofline (see Figure 42, p. 141). The gable (pitched) roof would create a distinct building silhouette as well as provide a functional form for the housing of mechanical equipment such as fans and cooling towers. This would be in contrast with the nearby box-like highrises and would be in keeping with the intentions of the Urban Design Element of the Comprehensive Plan and with policies contained in Guiding Downtown Development, June 1982. Vertical setbacks along the sides of the building would also taper the building's form and reduce the appearance of bulk. The project tower would be generally built to lot lines, respecting the orthogonal (right angle) building shapes on Stevenson St. The project's building mass and loggia along Stevenson St. would maintain the street wall and not expose the sidewalls of neighboring buildings.

The cornice and parapet lines at the 82-ft. height of the base element would relate to the nearby older buildings, including the Charles Schwab Building on the corner of Stevenson and Second Sts. and the lower part of the Chevron



● FIGURE 42:  
View of Alternative E  
from the North

SOURCE:  
Kaplan/McLaughlin/Diaz, Architects and  
Environmental Science Associates, Inc.



Building opposite the project site, as well as the older Jessie St. office buildings to the east. The setbacks on the west facade are designed to preserve the view slot of daylight and sky currently visible from Sansome St. north of Market St. (see Figure 43, p. 143; this Figure can be compared directly to Figure 16, p. 52). A view of the alternative from the south is shown in Figure 44, p. 144, which can be compared directly to Figure 17, p. 53. The Lincoln Plaza development, if constructed as currently designed, would completely block the view of the building shown in Figure 43.

With the intent of providing greater pedestrian amenities on Stevenson and Jessie Sts., Alternative E would have a series of pillars at the ground and mezzanine levels on Stevenson St. to define the street line. The scheme would complete the courtyard design of the Chevron Garden Plaza by matching the arcades at the base of the two Chevron buildings; the main axis of the alternative is on the axis of the Chevron Plaza. A pool is proposed next to the main entrance lobby to provide a relationship to the pool and fountain of the Chevron Garden Plaza.

### SHADOWS

It should be noted that both Alternative E and the Lincoln Plaza designs have stepped shapes; the stepping and the foreshortening and blocking of shadows caused by intervening buildings results in shadow shapes that do not always correspond visually to the shapes of the two buildings. The shadow outlines for the Lincoln Plaza and 49 Stevenson buildings show where these shadows would fall where not interrupted by intervening buildings; only where these outlines are not shaded by a pattern would new shadows from these buildings result. The shadow diagrams require careful review because of their complexity.

While the tapered design of Alternative E represents a reduction in building bulk from the proposed project, and its massing is concentrated on the eastern portion of the site to minimally affect views and daylight down the Sansome St. corridor, shadow patterns would be similar to those cast by the proposed project. Figures 45-62, show shadow patterns at various times of the year as cast by Alternative E to supplement the text discussion below. As with the





● FIGURE 43: View of Alternative E  
from Sansome St.

SOURCE: Kaplan/McLaughlin/Diaz, Architects and  
Gensler & Associates, Architects





▲ 595 Market

▲ Chevron Bldg.

▲ ALTERNATIVE E

▲ 525 Market

▲ Ecker Square

SOURCE: Kaplan/McLaughlin/Diaz, Architects, and Environmental Science Associates, Inc.

● FIGURE 44:  
View of Alternative E from the South

proposed project, shadows cast by this alternative at midday (from about 11:30 a.m. on) in winter and spring months, and from about 12:30 p.m. on in fall months, would have progressed eastward sufficiently to miss the Chevron Garden Plaza entirely or shade half or less of this plaza. (The shadow diagrams do not show shadows that are cast by buildings on the north side of Market St.)

### Spring

At 10 a.m., Alternative E would shade the Chevron Garden Plaza and sidewalks on both sides of Market St. (see Figure 45, p. 146). The Alternative's Jessie St. plaza would be shaded by the proposed Lincoln Plaza building at 11 a.m. (see Figure 46, p. 147); the Alternative would shade a little more than half of the Chevron Garden Plaza, and a portion of the southerly Market St. sidewalk. At noon, the alternative's Jessie St. plaza would be mostly in the sunlight (see Figure 47, p. 148). The Alternative would shade a portion of Stevenson St., including sidewalks on both sides of the street, and rooftops of buildings. The Alternative's Jessie St. plaza would be almost entirely free of shadows from neighboring buildings. At 1 p.m., the building would shade Stevenson St. and its northerly sidewalk, roofs of buildings, and one corner of the elevated plaza of the Tishman building (see Figure 48, p. 149). The Alternative's Jessie St. plaza would remain mostly free of shadows.

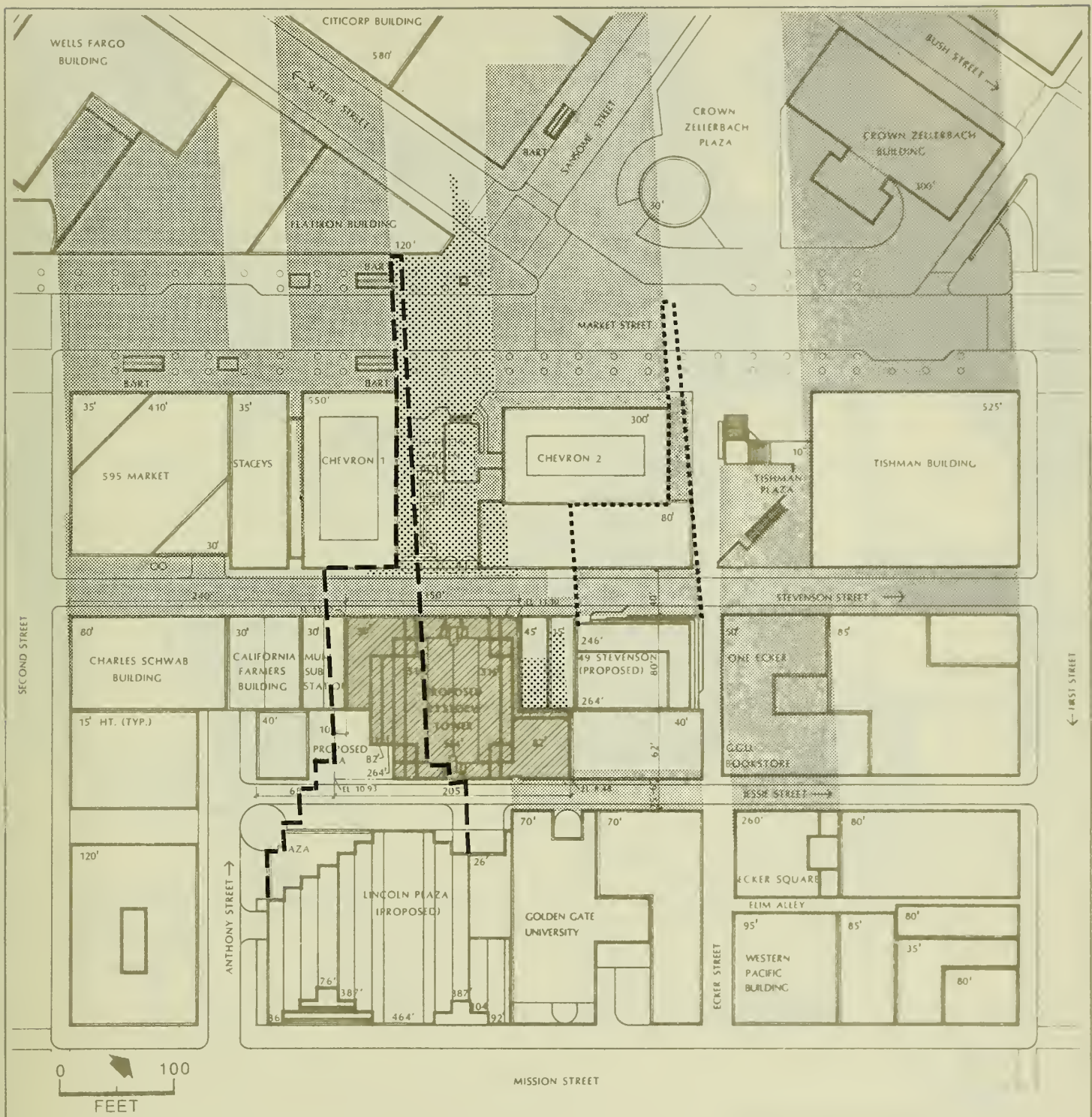
After 1 p.m., the building would not shade any public plazas (see Figure 49, p. 150). It would shade Stevenson St., moving eastward to cover primarily rooftops by 2 p.m.

### Summer (Daylight Saving Time)

At 10 a.m., this alternative would shade the northerly half of Stevenson St., some roof area of nearby buildings, and a corner of the Chevron Garden Plaza (see Figure 50, p. 151). It would also shade a corner of the Alternative's project plaza on Jessie St. The Lincoln Plaza building would shade most of this plaza.

At 11 a.m., the building would shade about half of the Chevron Garden Plaza, and Stevenson St. and its northwesterly sidewalk (see Figure 51, p. 152). The





## LEGEND



Project

Existing Shadow

New Shadow from Project

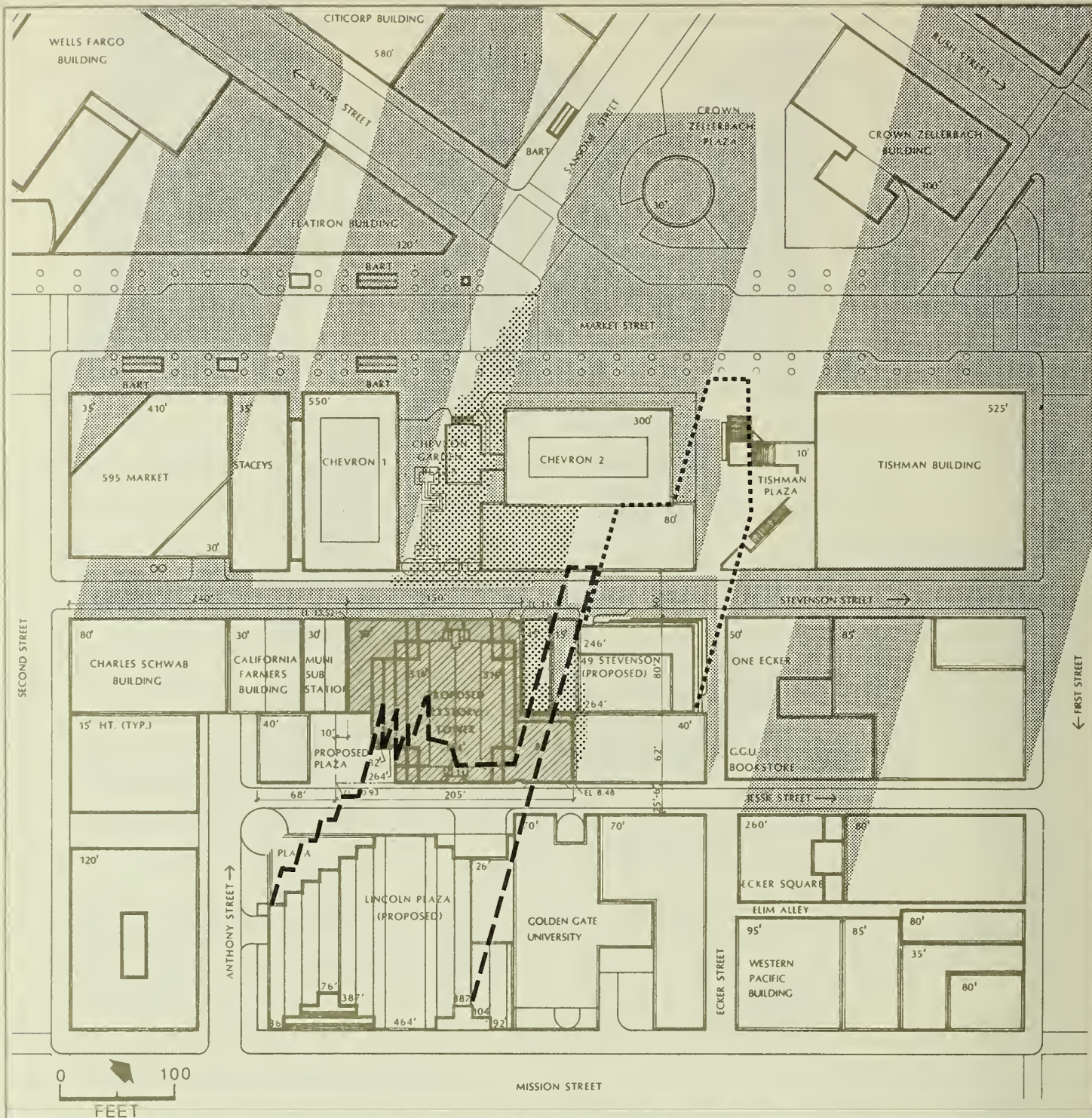
--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● FIGURE 45:  
Alternative E Shadow Patterns -  
March 10 A.M. P.S.T.

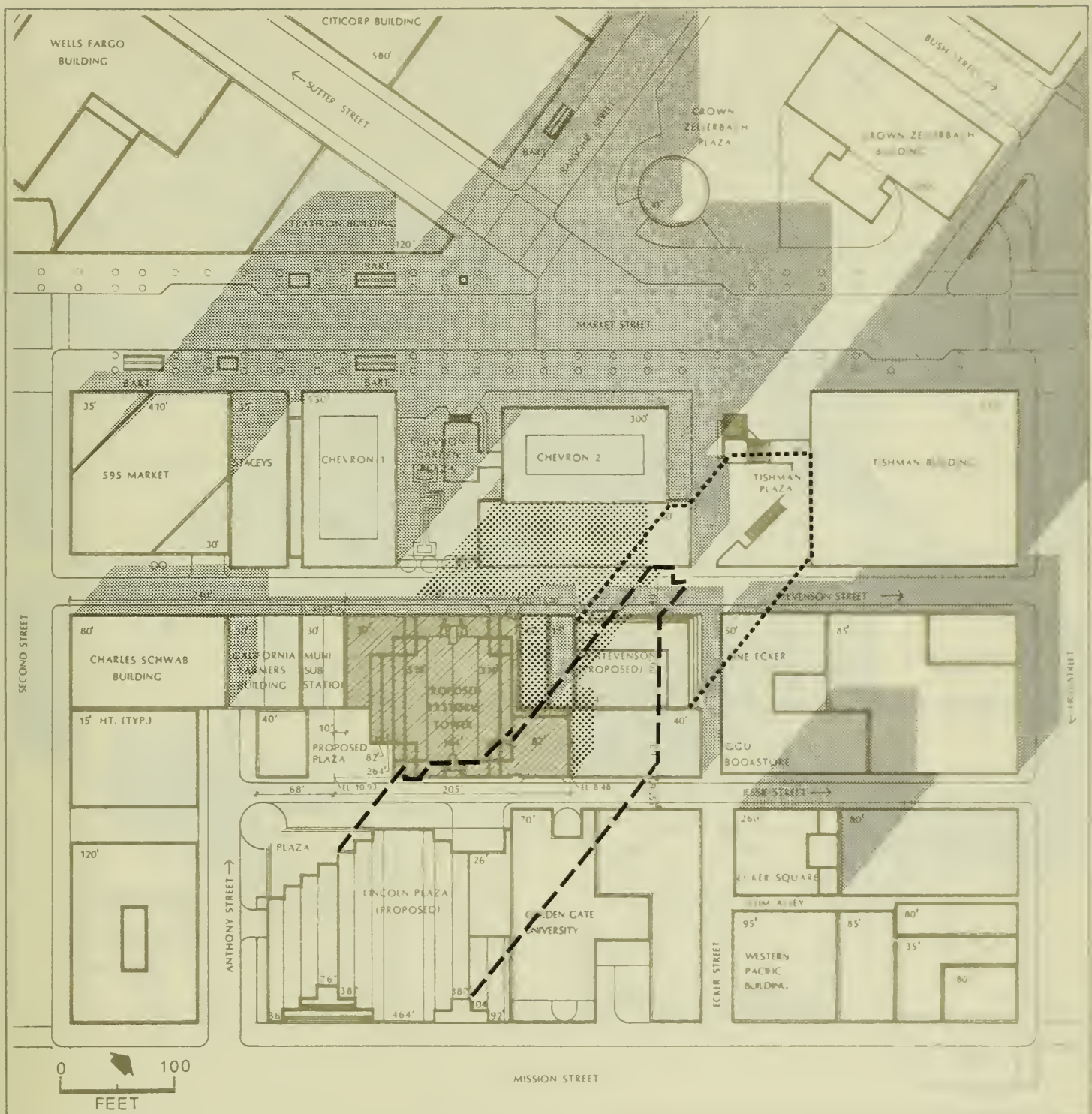
BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





● **FIGURE 46:**  
 Alternative E Shadow Patterns -  
 March 11 A.M. P.S.T.

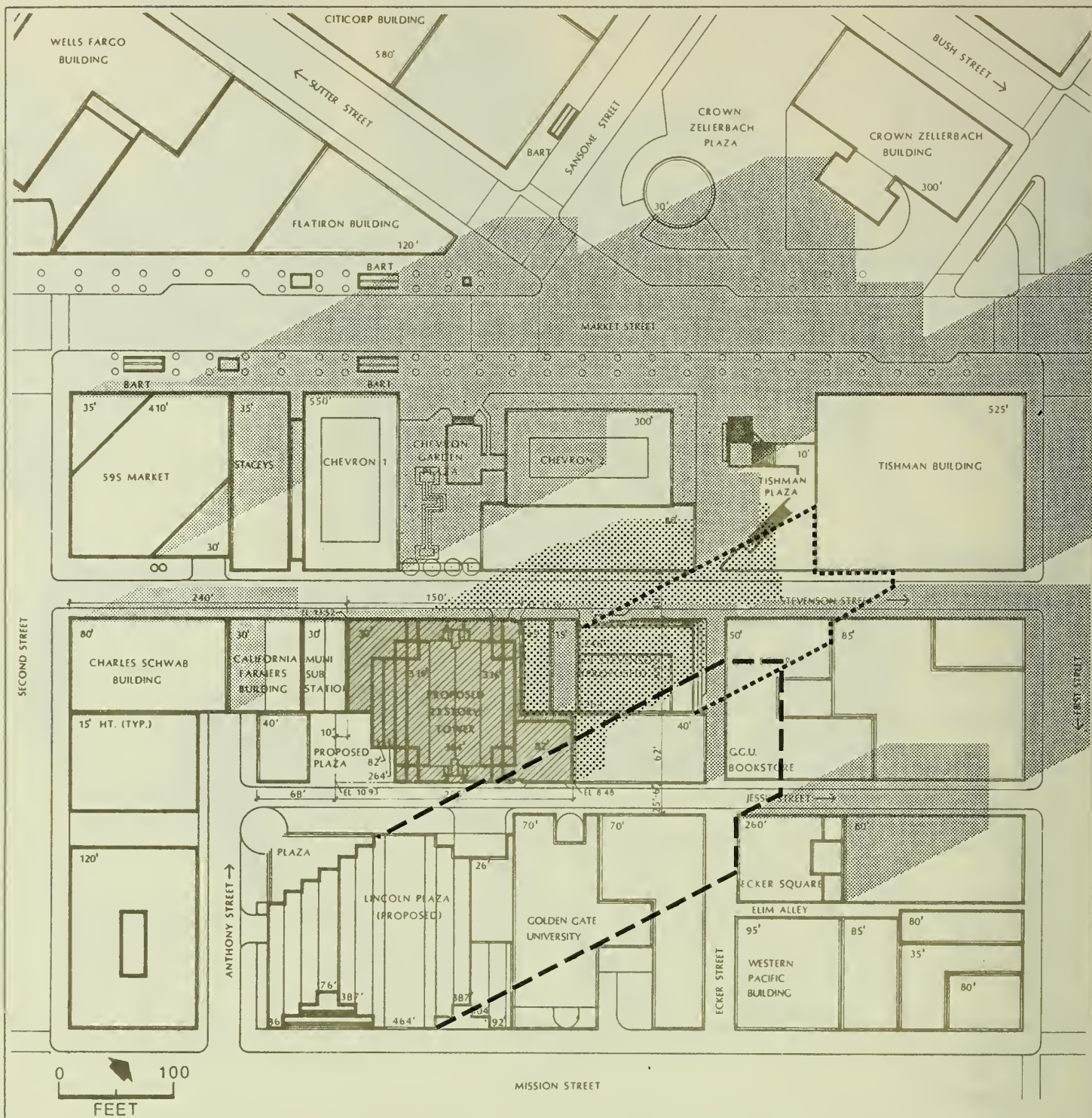




● **FIGURE 47:**  
Alternative E Shadow Patterns -  
March Noon P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project



Existing Shadow



New Shadow from Project

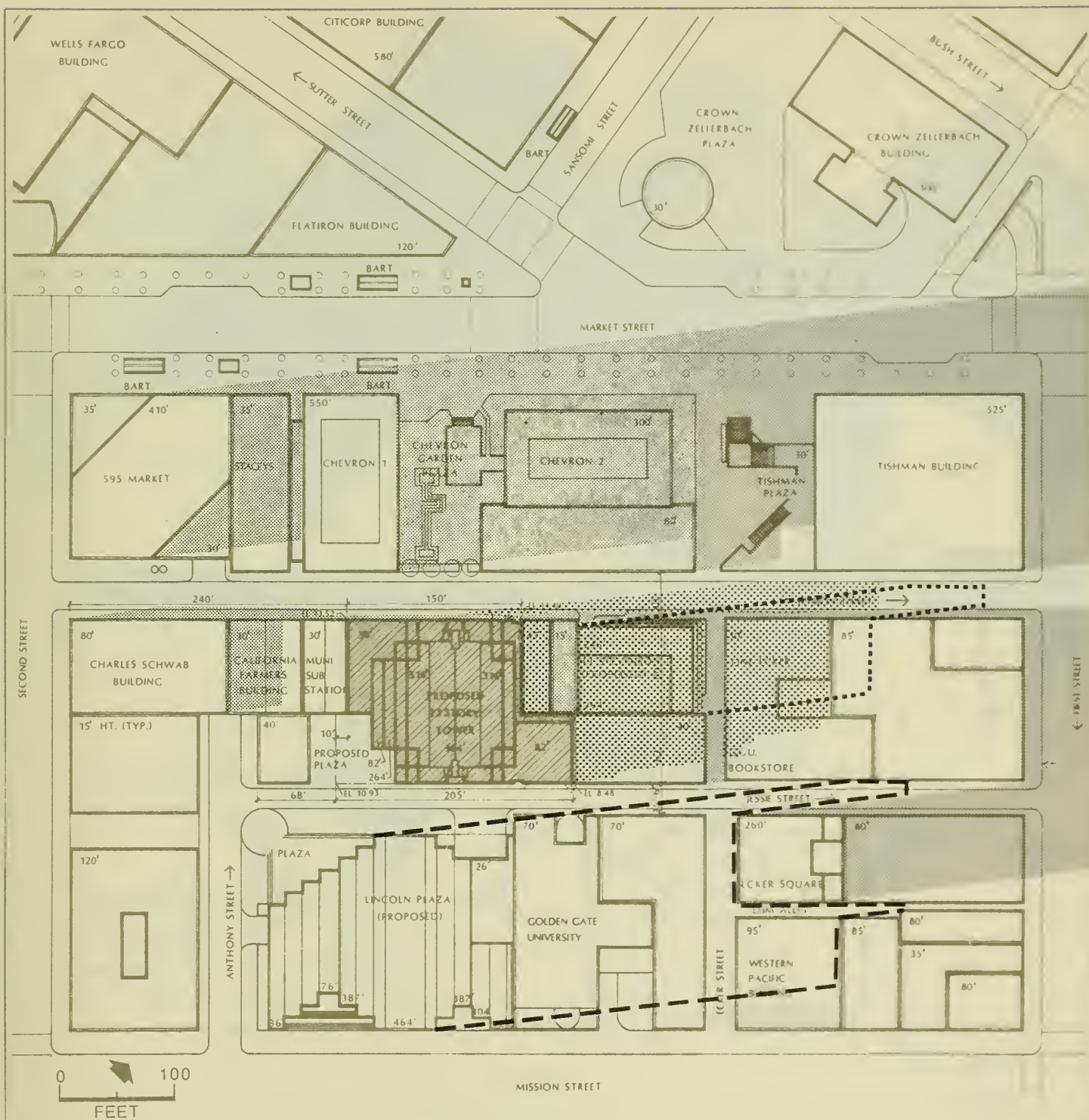
— — — Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● **FIGURE 48:**  
Alternative E Shadow Patterns -  
March 1 P.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

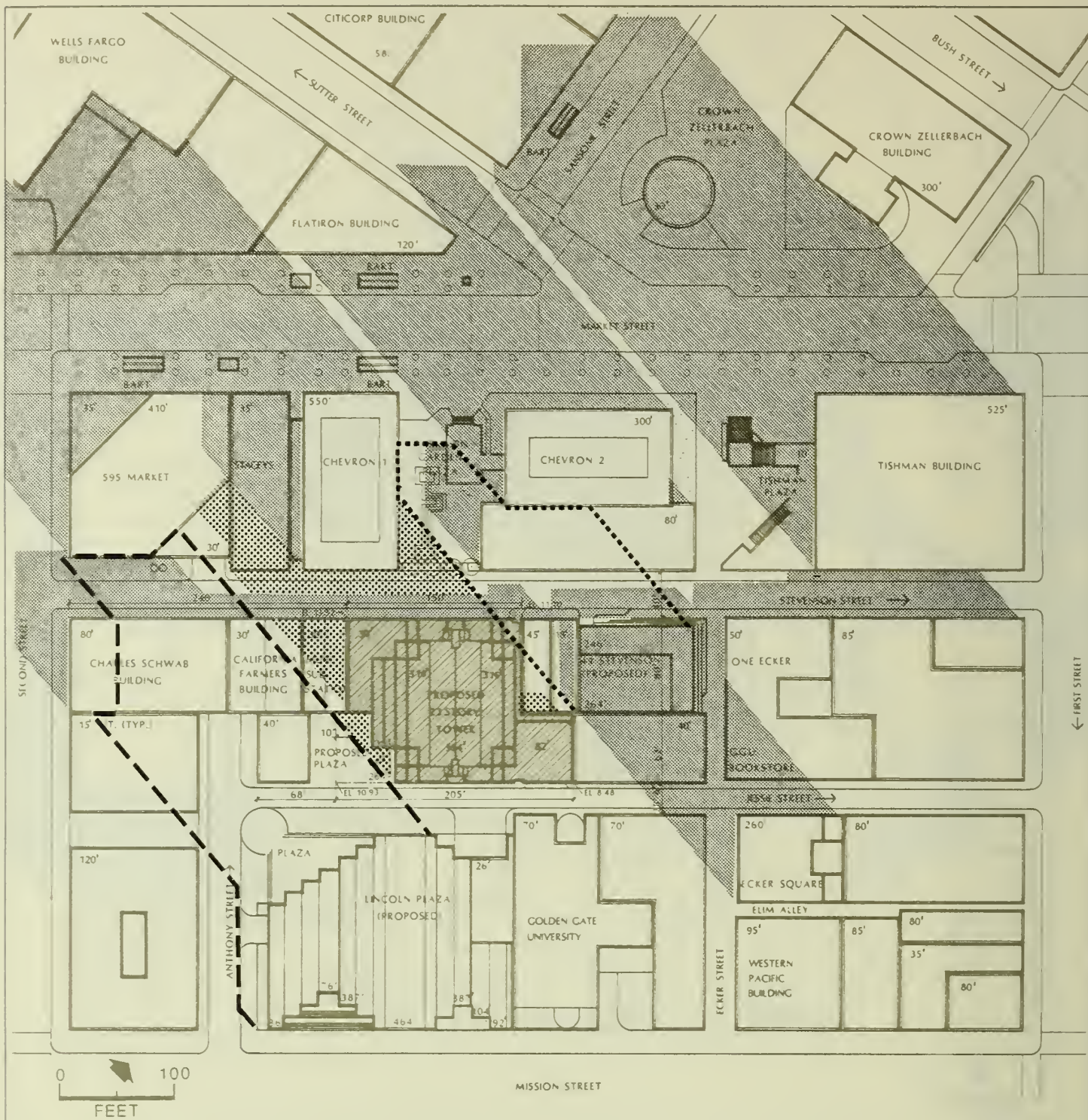
--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● FIGURE 49:  
Alternative E Shadow Patterns -  
March 2 P.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

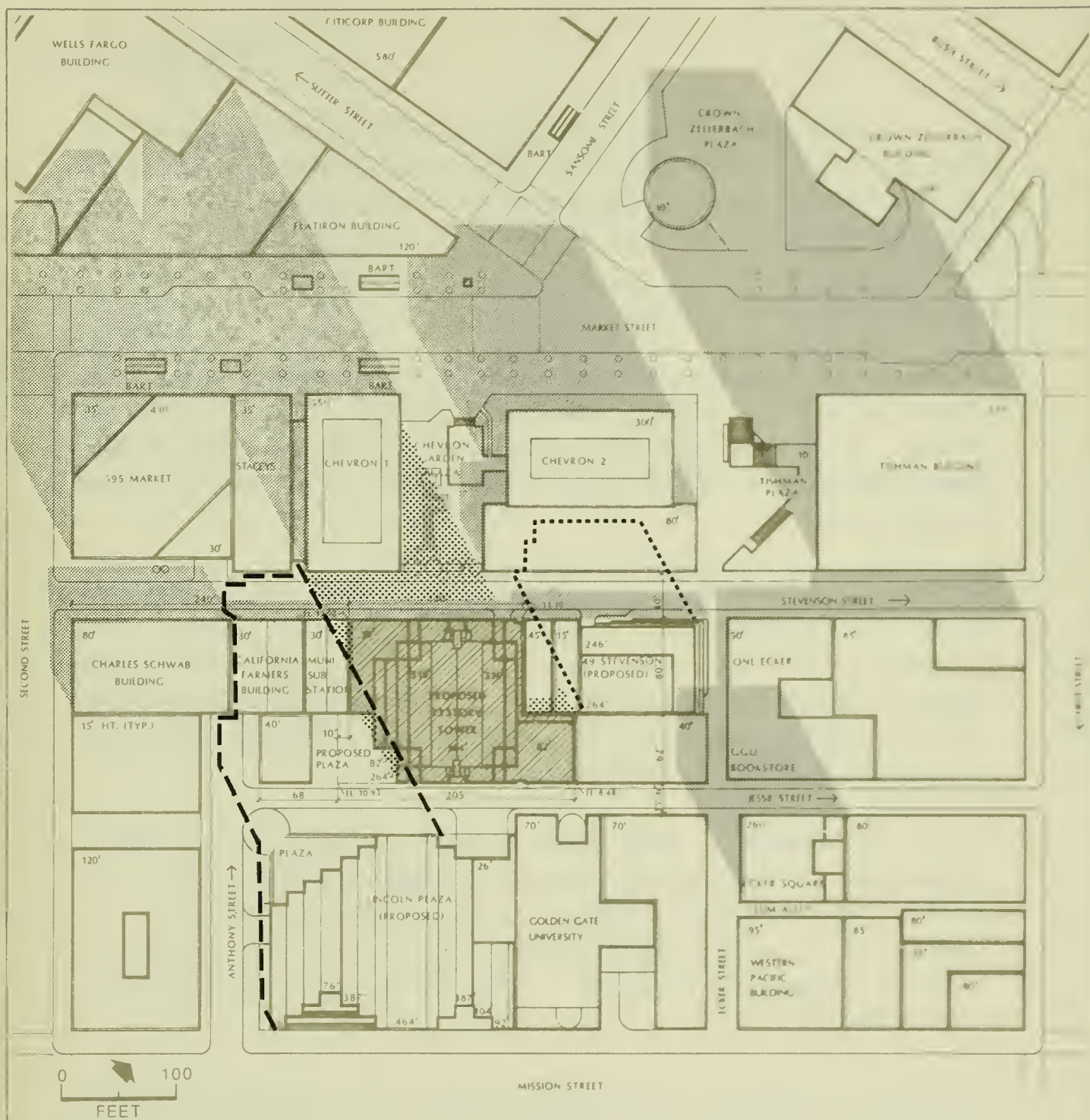
— — — Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● **FIGURE 50:**  
Alternative E Shadow Patterns -  
June 10 A.M. P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project



Existing Shadow



New Shadow from Project

--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

## ● FIGURE 51:

Alternative E Shadow Patterns -  
June 11 A.M. P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz

SHADOW INFORMATION: Environmental Science  
Associates, Inc.

Jessie St. plaza would be entirely shaded by the Lincoln Plaza proposal. At noon, the building would shade the southerly half of the Chevron Garden Plaza, and Stevenson St. and its northerly sidewalk (see Figure 52, p. 154). The Jessie St. plaza would be almost entirely shaded by the Lincoln Plaza building.

### Fall (Daylight Saving Time)

At 10 a.m., the building would shade about half of the Chevron Garden Plaza. Shadows would not extend past the Chevron 1 Tower (see Figure 53, p. 155). At 10 a.m., the building would cast new shadow across about two-thirds of the Chevron Garden Plaza, with the shadow extending as a narrow strip to the north side of Market St.

At 11 a.m., the building would shade the Chevron Garden Plaza and a portion of Market St., including both sidewalks (see Figure 54, p. 156). The Alternative's Jessie St. plaza would be shaded by the Lincoln Plaza building. However, sunlight would reach portions of the area proposed to be paved that are not located on the project site; that is, the Muni driveway, Jessie St. itself, and a portion of the Lincoln Plaza open space.

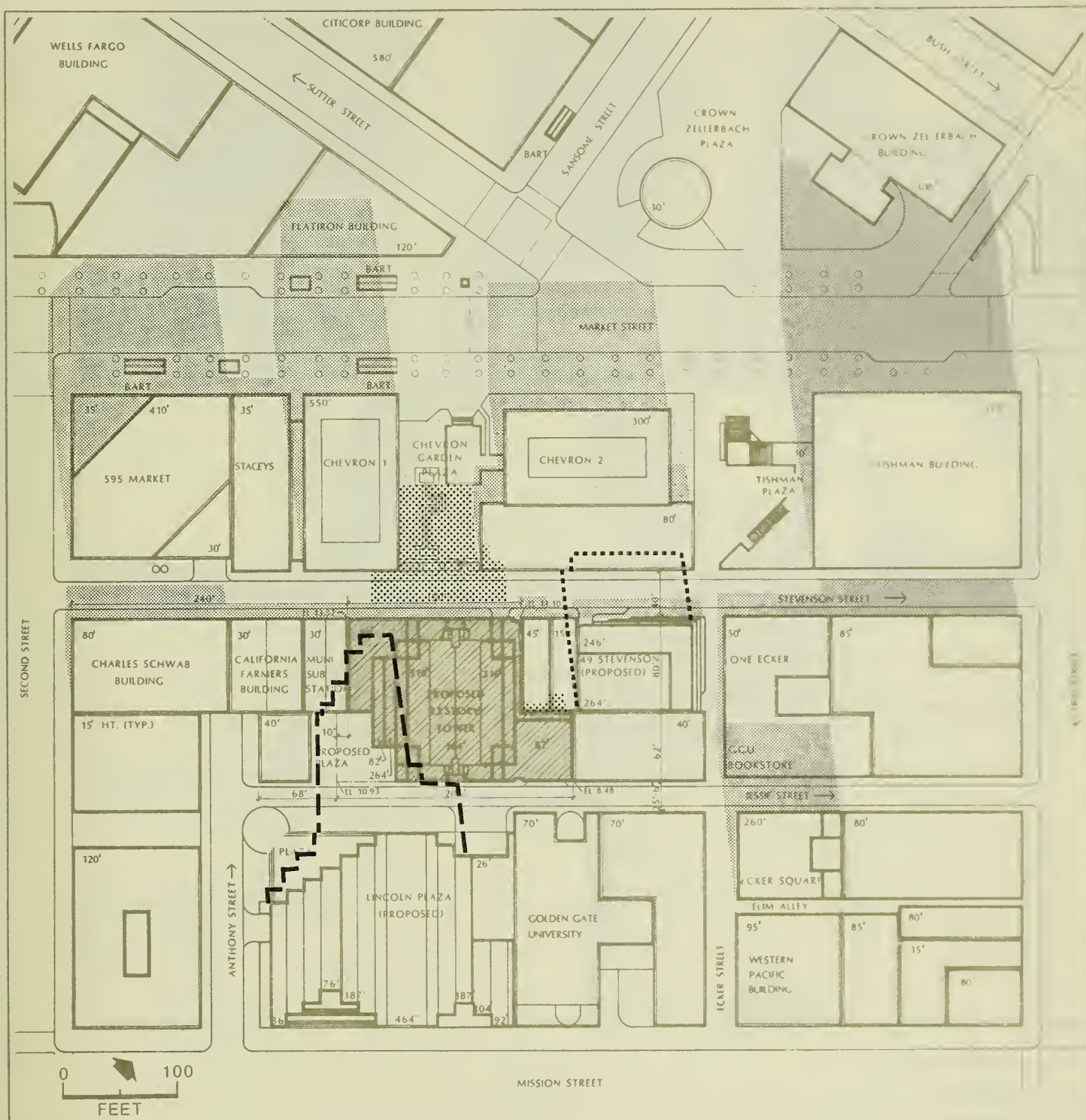
At noon, the alternative would shade a little less than half of the Chevron Garden Plaza and the northerly Stevenson St. sidewalk (see Figure 55, p. 157). The Alternative's Jessie St. plaza would be largely free of shadows. At 1 p.m., the alternative would shade Stevenson St. and the northerly sidewalk (see Figure 56, p. 158). The Jessie St. plaza would be free of shadows.

At 2 p.m., the alternative would shade Stevenson St. including the northerly sidewalk, and a portion of the Tishman building's elevated deck over the plaza (see Figure 57, p. 159).

Winter: Winter shadows are the longest of the year because of the sun's low position in the sky.

At 10 a.m., the building would shade about two-thirds of the Chevron Garden Plaza (see Figure 58, p. 160). The shadow would extend across Market St. to





## LEGEND



Project

Existing Shadow

New Shadow from Project

--- Extent of Proposed Lincoln Plaza Shadow

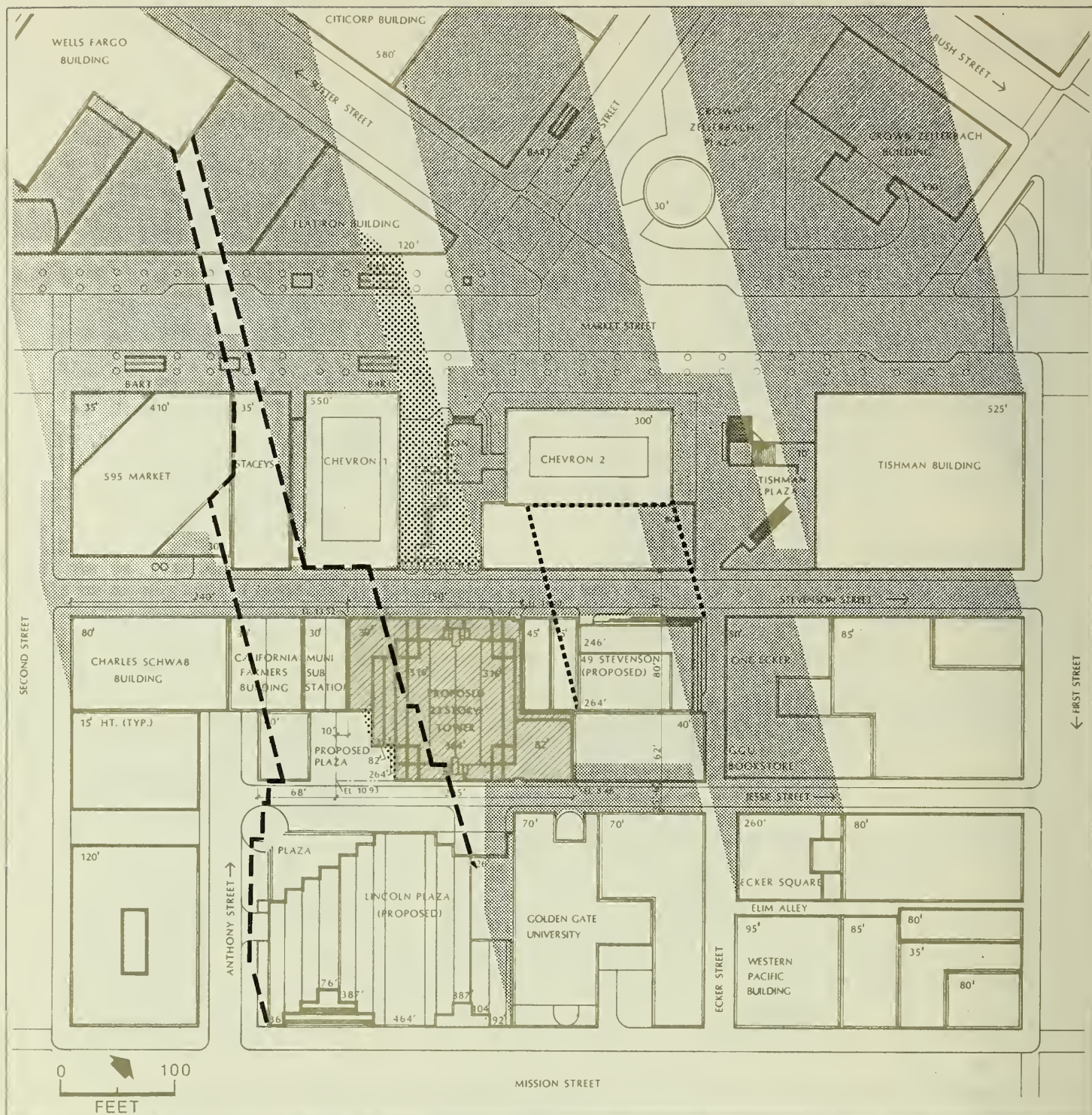
..... Extent of Proposed 49 Stevenson Shadow

## ● FIGURE 52:

Alternative E Shadow Patterns -  
June Noon P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

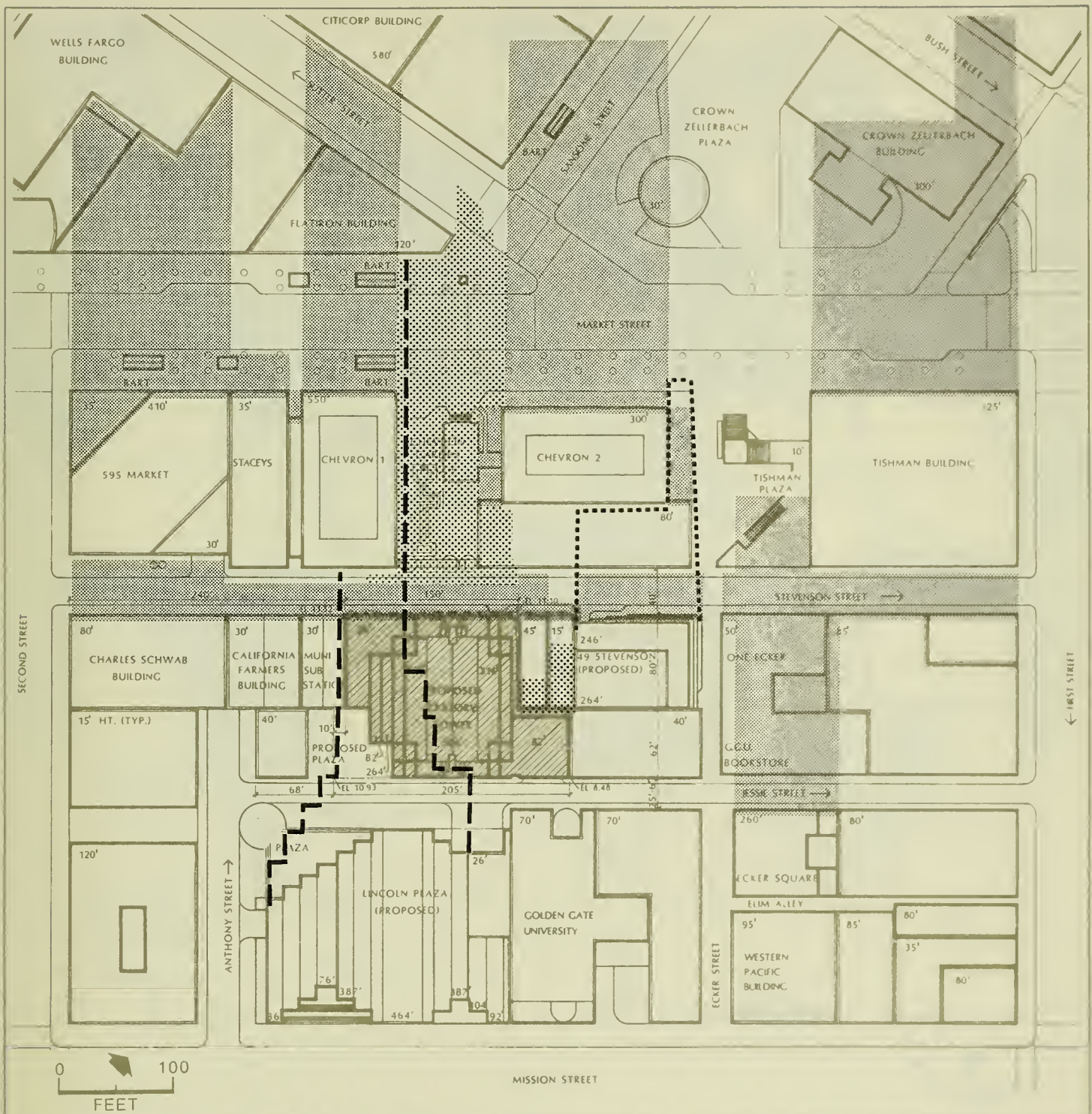
— — — Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● **FIGURE 53:**  
Alternative E Shadow Patterns -  
September 10 A.M. P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.

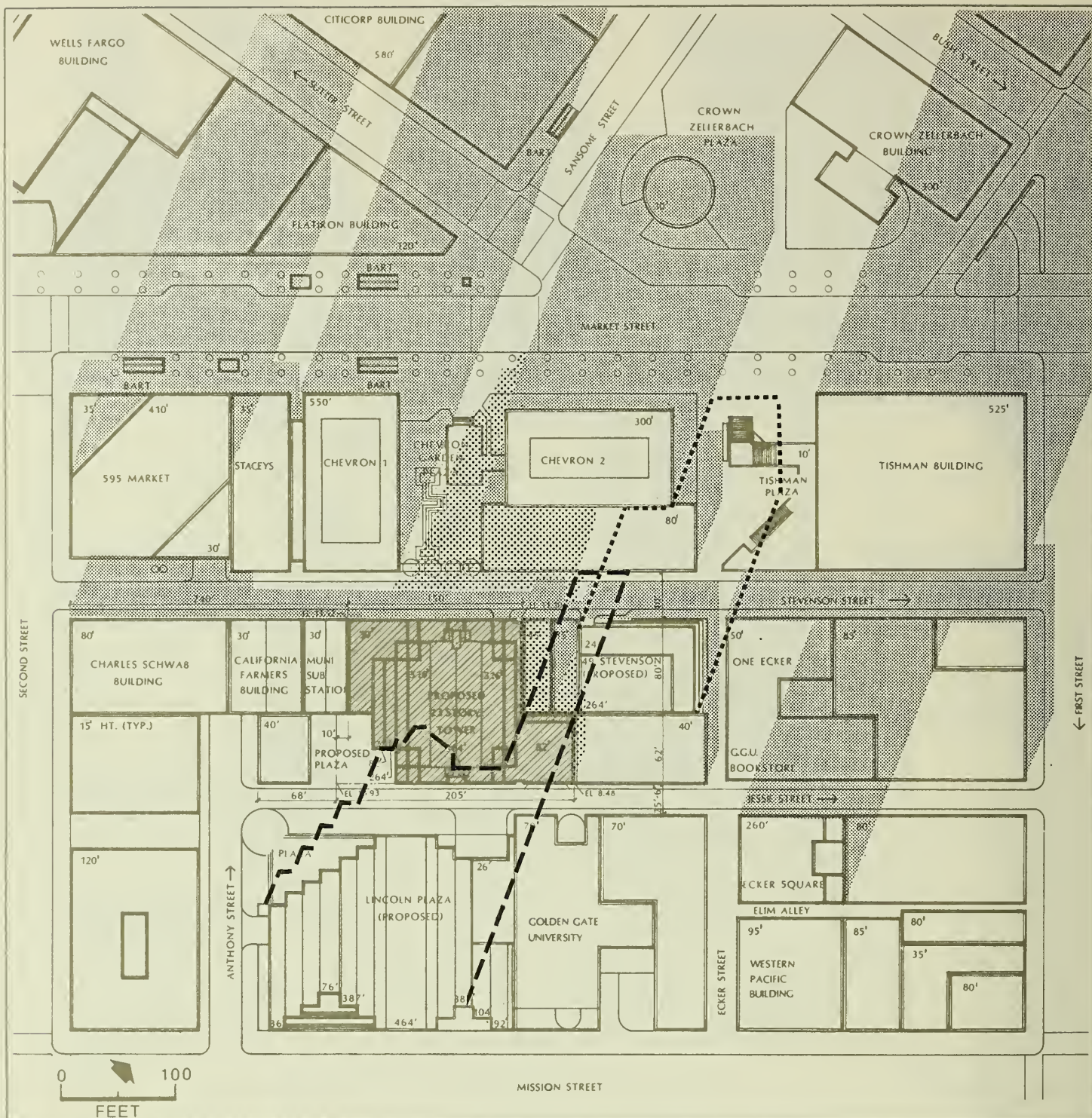




● **FIGURE 54:**  
Alternative E Shadow Patterns -  
September 11 A.M. P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project



Existing Shadow



New Shadow from Project

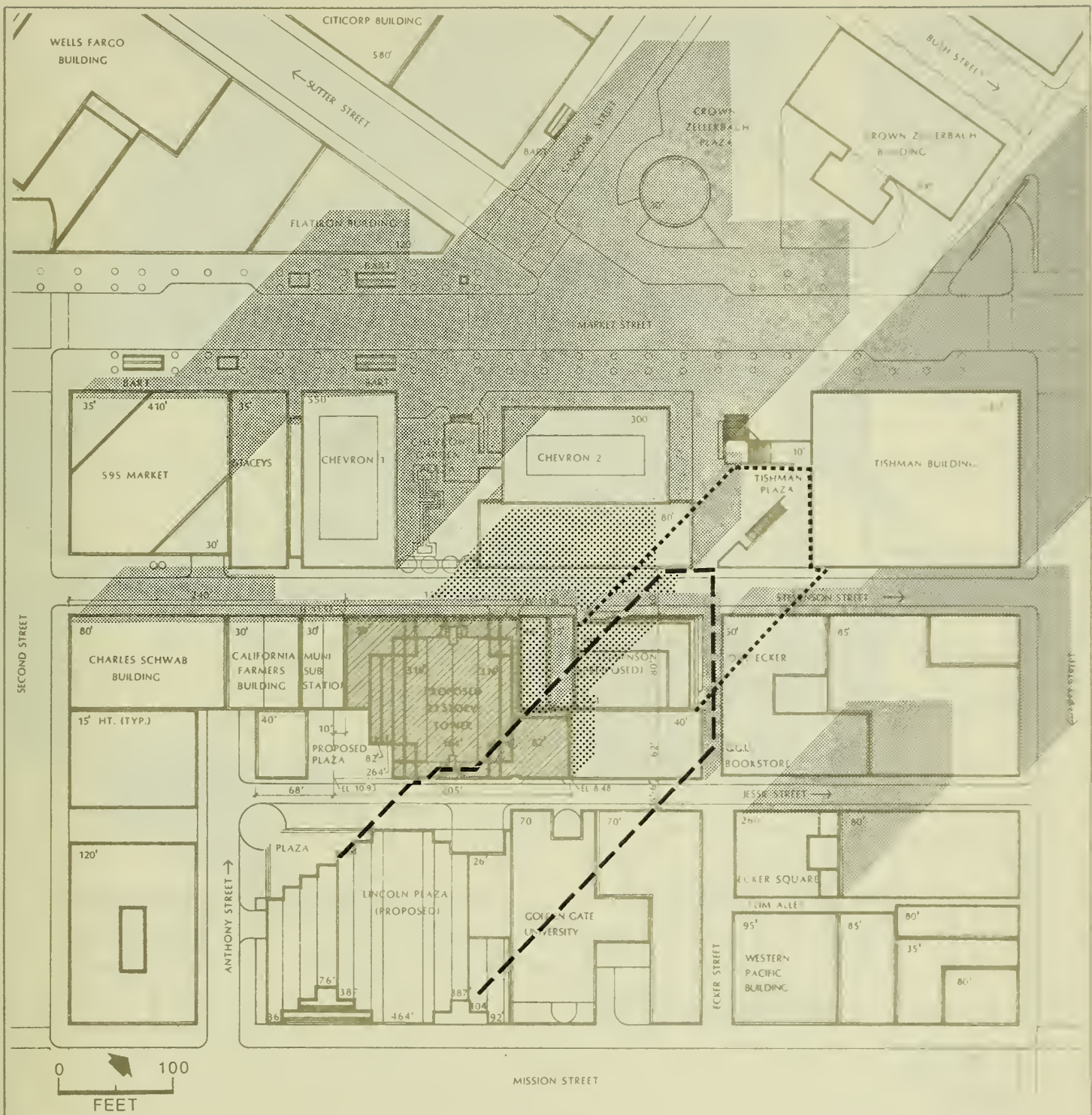
— — — Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● FIGURE 55:  
Alternative E Shadow Patterns -  
September Noon P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

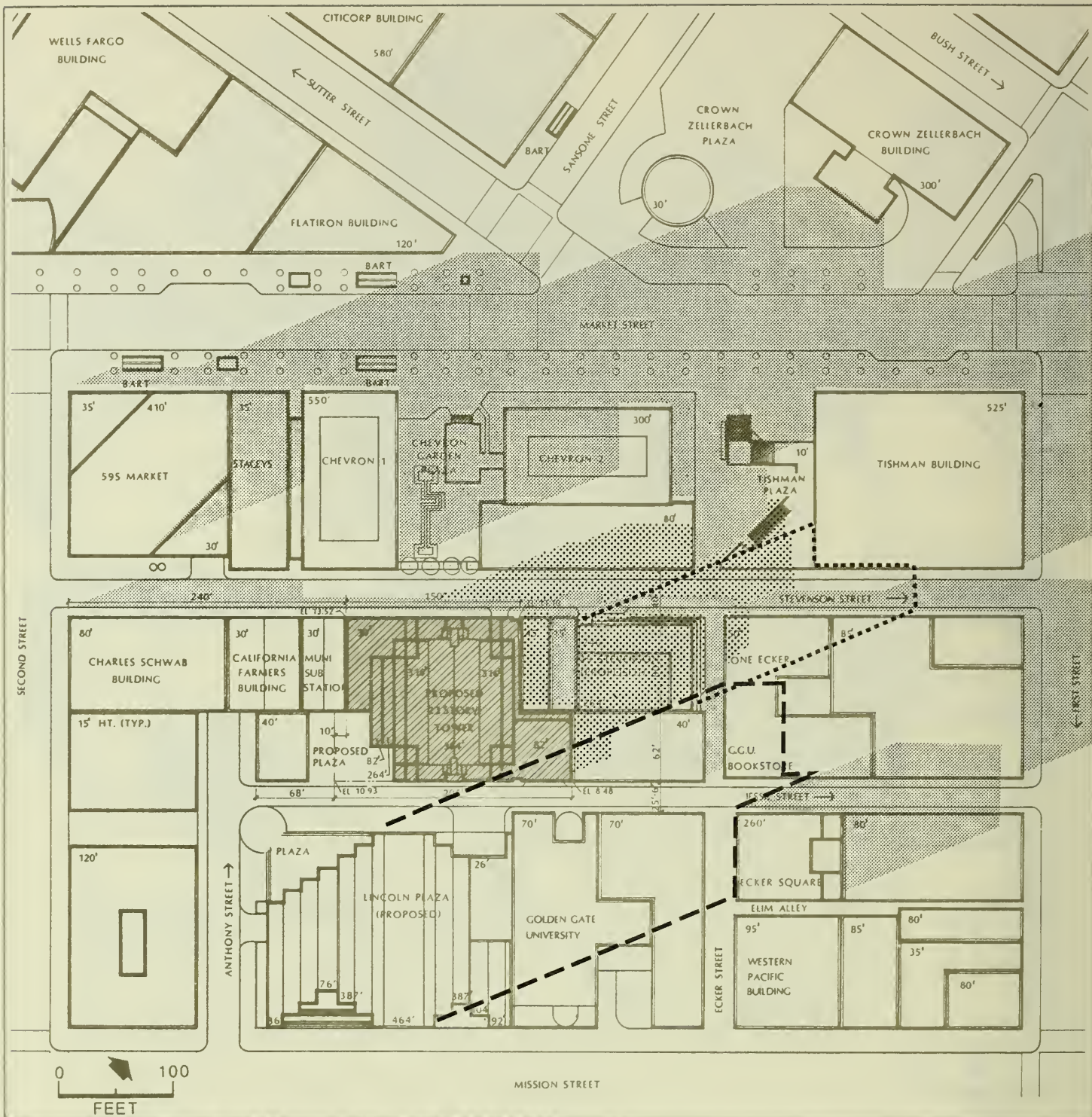
— — — — — Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● FIGURE 56:  
Alternative E Shadow Patterns -  
September 1 P.M. P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

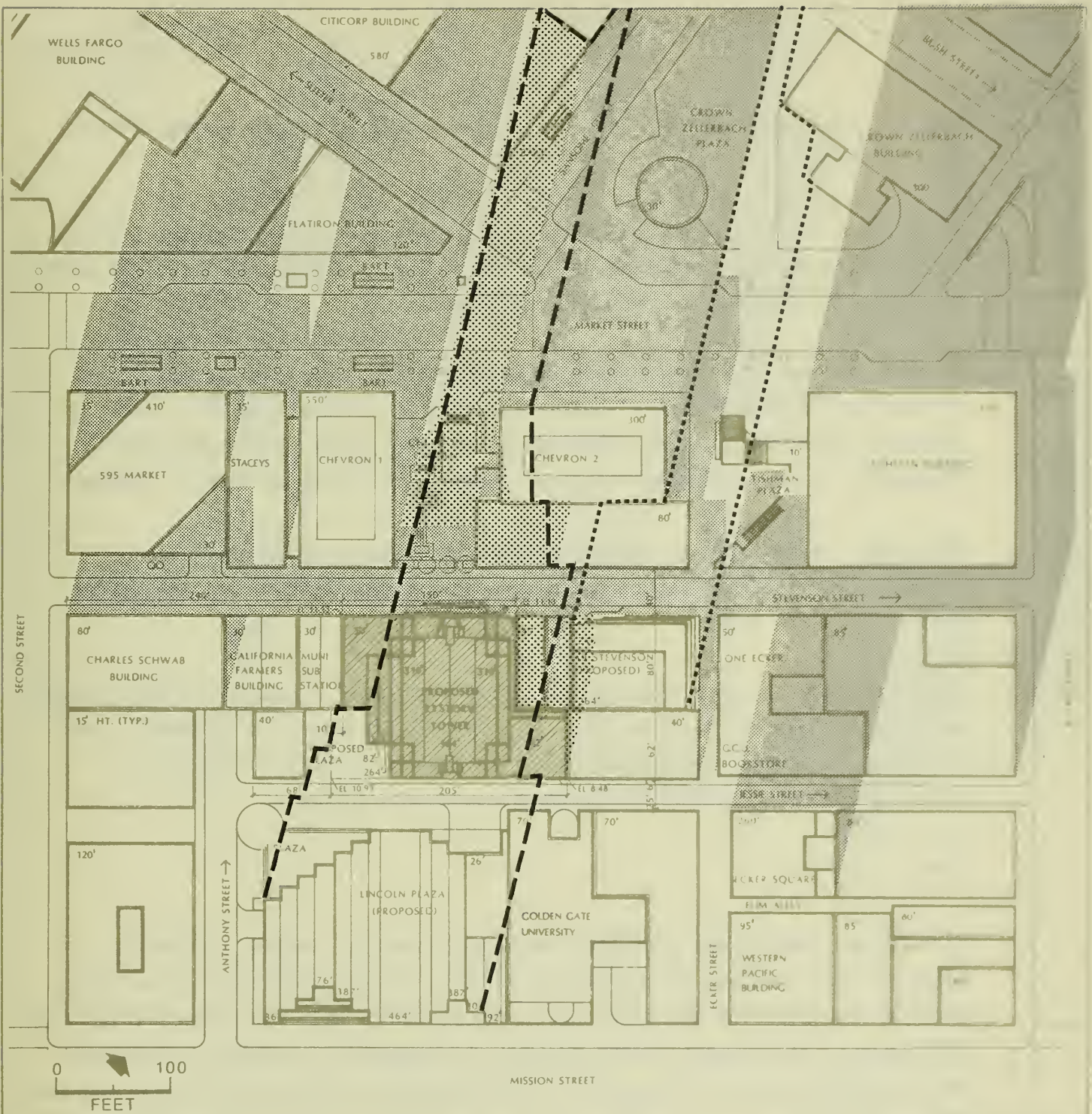
— Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● FIGURE 57:  
Alternative E Shadow Patterns -  
September 2 P.M. P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

— — — — — Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● **FIGURE 58:**  
Alternative E Shadow Patterns –  
December 10 A.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz

SHADOW INFORMATION: Environmental Science  
Associates, Inc.

Bush St. The Alternative's Jessie St. plaza would be shaded by the Lincoln Plaza building.

At 11 a.m., the building would shade the southeasterly corner of the Chevron Garden Plaza and rooftops (see Figure 59, p. 162). The Jessie St. plaza would be partially shaded by surrounding buildings.

At noon, the building would shade primarily rooftops, with a slender projection reaching from the southerly Market St. sidewalk to the sunken driveway into the Crown Zellerbach building basement parking garage (see Figure 60, p. 163). The Alternative's Jessie St. plaza would be in shadow.

At 1 p.m., in addition to shading roofs, the building would shade the southerly half of the Tishman building's deck (see Figure 61, p. 164). The Jessie St. plaza would be in shadow.

At 2 p.m., the building would cast shadows over about a quarter of the Tishman building's elevated platform, and the northerly Stevenson St. sidewalk (see Figure 62, p. 165). The Jessie St. plaza would be mostly shaded by an existing building adjacent to the Muni substation driveway.

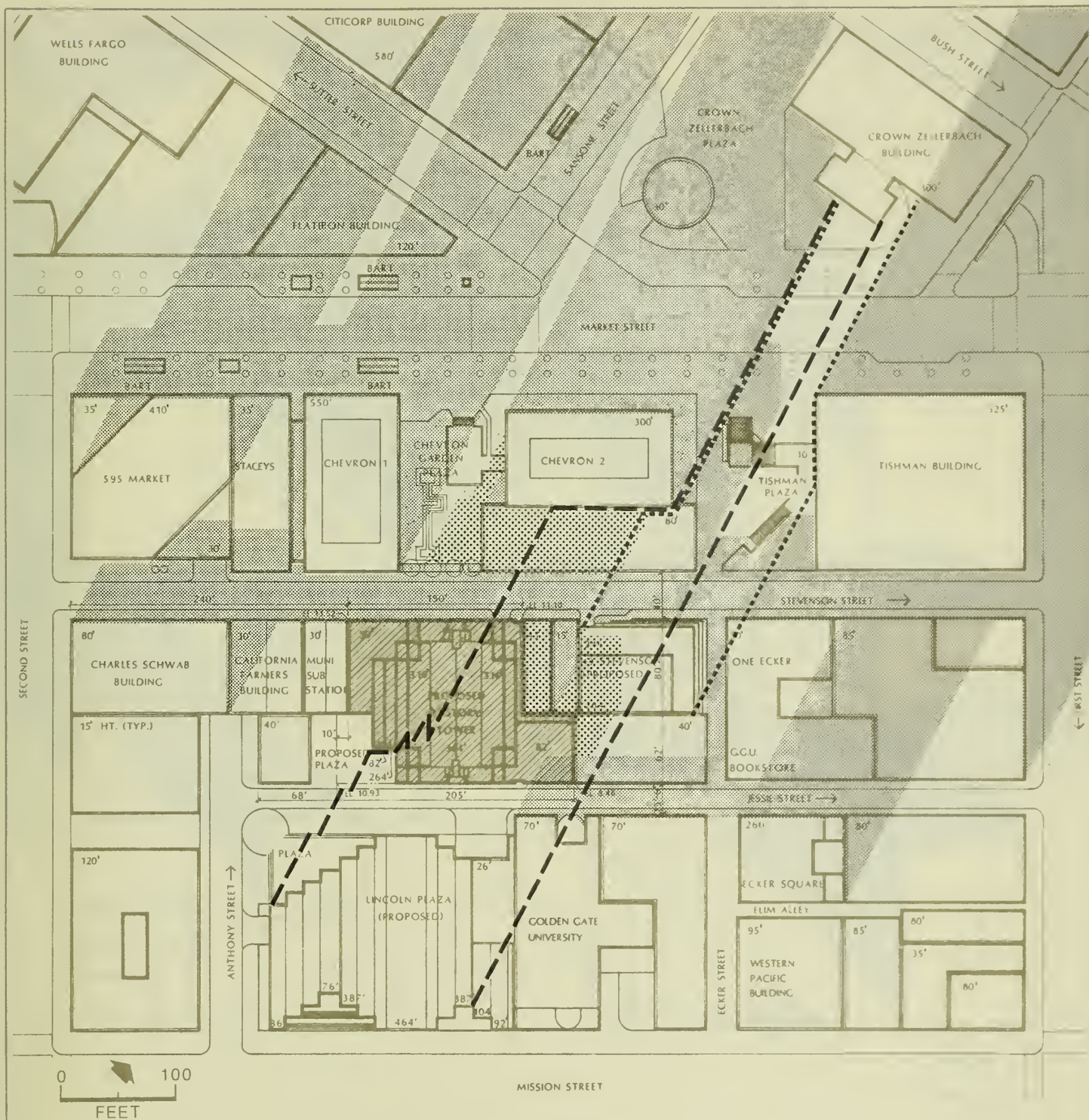
### WIND

Wind tunnel testing was conducted for Alternative E. Several different scenarios were tested, those relevant to this discussion being: the existing setting (to establish the base case); Alternative E with the Lincoln Plaza and 49 Stevenson developments (with designs as proposed at the time of the test); the Alternative with 49 Stevenson; the Alternative with Lincoln Plaza; and the Alternative alone. The complete text of the report (Dr. Bruce White, March 1983, Wind Tunnel Studies of the 71 Stevenson St. Project) is available for public review at the Office of Environmental Review, 450 McAllister St., 5th Floor.

### Pedestrian Discomfort

Information on comfort of pedestrians under various conditions (e.g., sun exposure, cool and warm temperatures, light and heavy clothing, and various





## LEGEND



Project



Existing Shadow



New Shadow from Project

--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

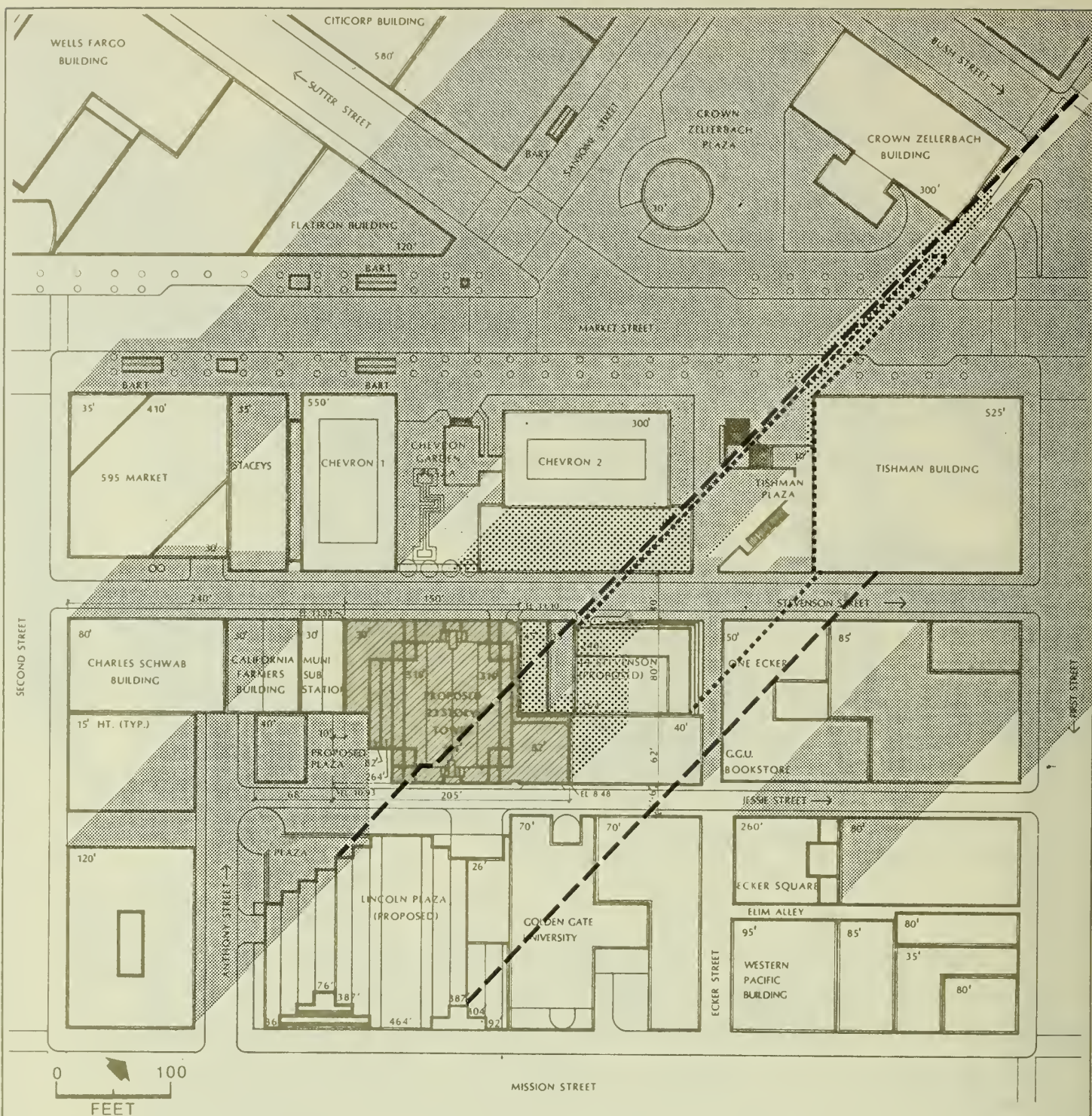
## ● FIGURE 59:

Alternative E Shadow Patterns -  
December 11 A.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz

SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

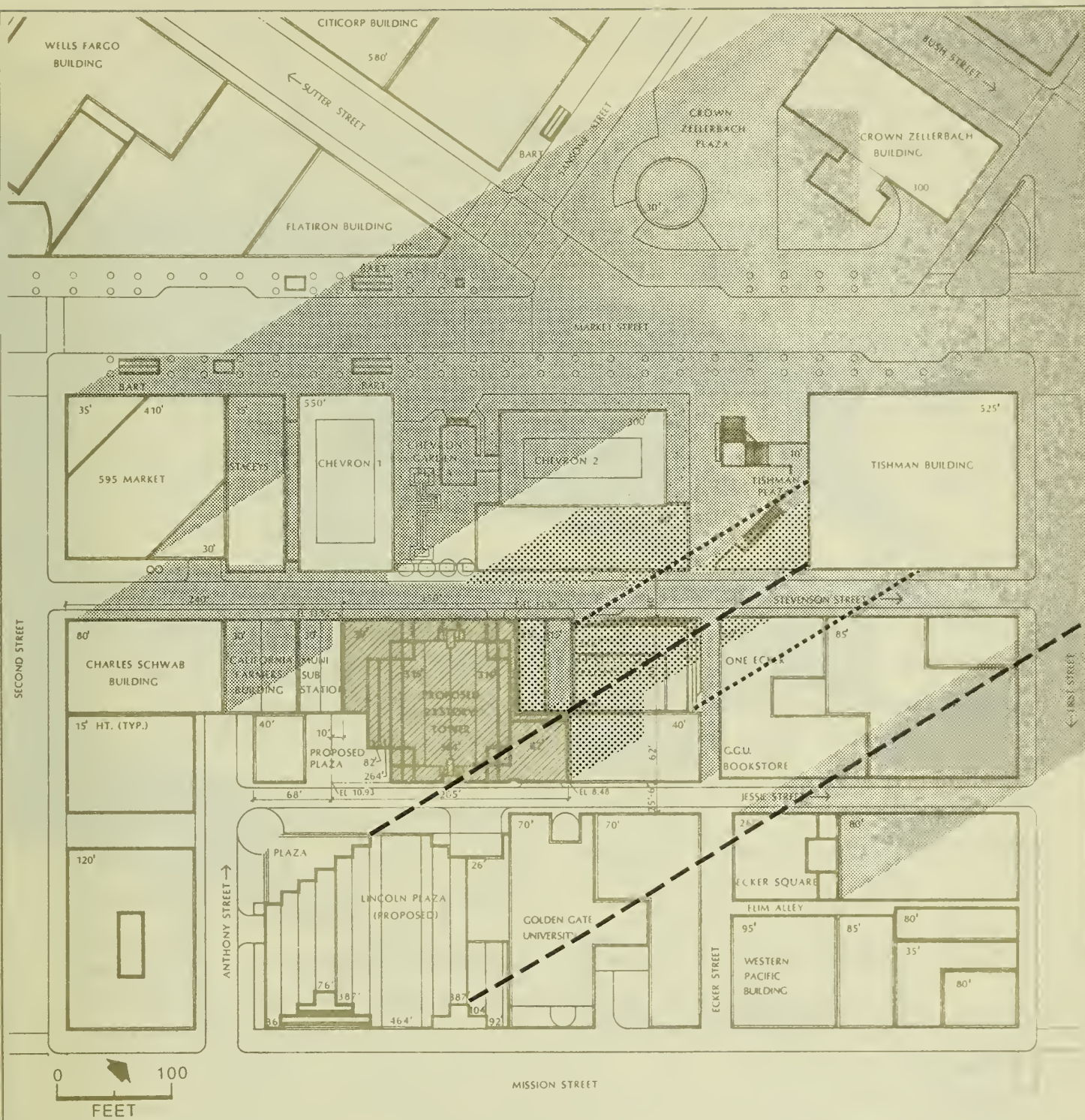
— — — Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● FIGURE 60:  
Alternative E Shadow Patterns -  
December Noon P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project



Existing Shadow



New Shadow from Project

— — — Extent of Proposed Lincoln Plaza Shadow

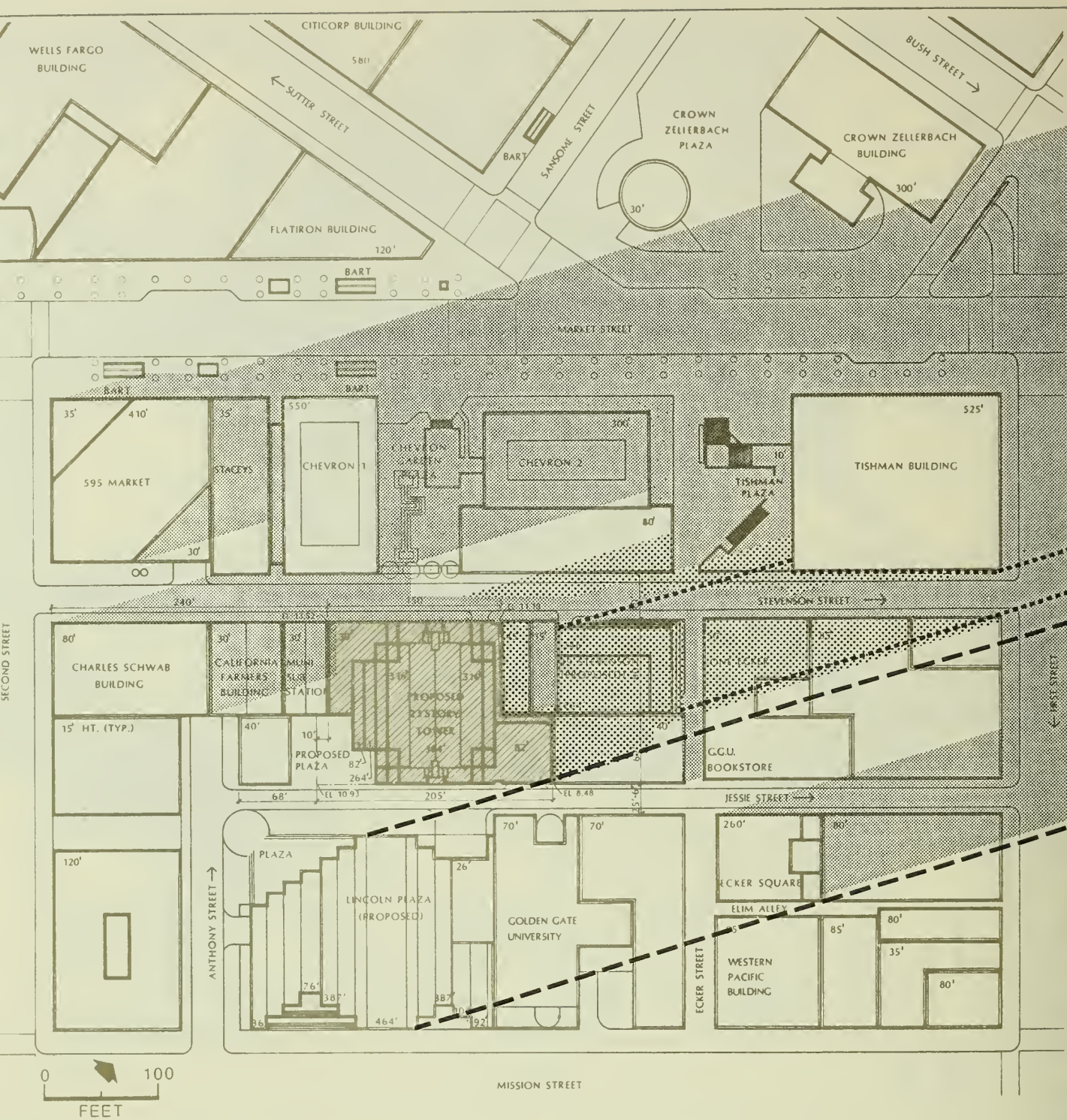
..... Extent of Proposed 49 Stevenson Shadow

● FIGURE 61:  
Alternative E Shadow Patterns -  
December 1 P.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz

SHADOW INFORMATION: Environmental Science  
Associates, Inc.





● **FIGURE 62:**  
Alternative E Shadow Patterns -  
December 2 P.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.

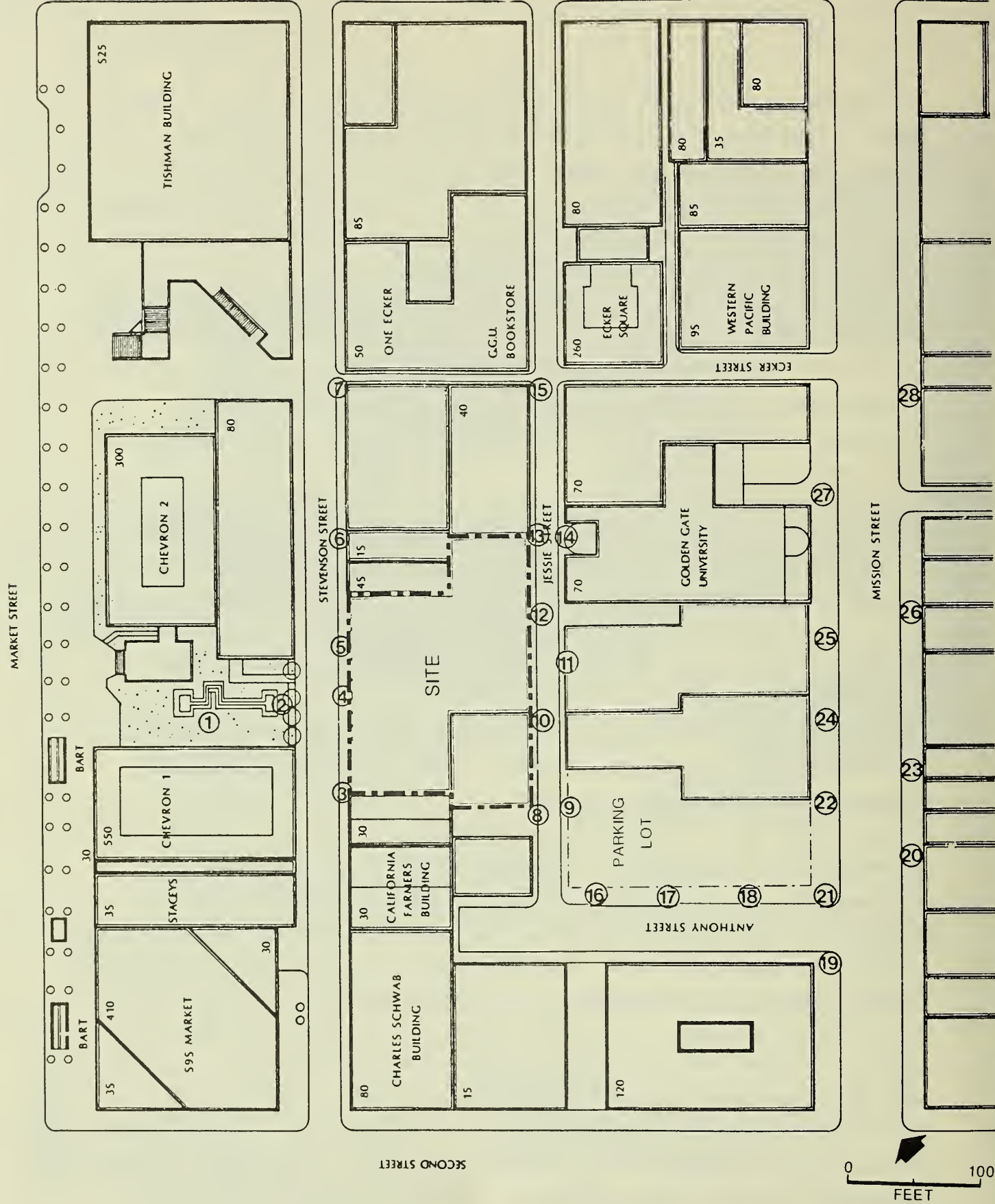


wind speeds) is provided by Lawson and Penwarden (1976). Penwarden (1973) suggests degrees of discomfort that are created by various wind speeds. For winds up to 4 miles per hour (mph), there is no pedestrian discomfort; for winds from 4 to 8 mph, wind is felt on the face. Winds from 8 to 13 mph will disturb hair, will flap clothing, and will extend a light flag mounted on a pole. Winds from 13 to 19 mph will raise dust, dry soil and loose paper, and disarrange hair. For winds from 19 to 26 mph, the force of the wind will be felt on the body. At 26 mph the limit of agreeable wind on land is defined. From 26 to 34 mph winds, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 mph increase difficulty with balance and can blow people over by gusts.

In view of the above information, a mean windspeed of 11 mph was selected as the comfort criterion and 25 mph as a hazard criterion. Results are reported in terms of ground-level windspeeds on summer afternoons at 4 p.m., generally the windiest time of the year. Hazard wind speeds were not encountered during the course of the study, and the comfort criterion was rarely exceeded.

The measured wind-tunnel wind speeds are presented as mph in this report; thus, for the wind speeds given in mph, 11 would represent 11 mph, which corresponds to the comfort criterion.

Experiments were performed for 3 prevailing wind directions (westerly, northwesterly and southwesterly) for all tested scenarios. The annual frequencies measured at BAAQMD offices for each of the prevailing winds are as follows: northwest, 4%; west, 51%, southwest, 14%. These wind directions are the most common in San Francisco, and are therefore the most representative for evaluation purposes. In the wind tunnel, all hot-wire measurements were taken at the same series of surface points around the building site for all 3 wind directions and scenarios (see Figure 63, p. 167). Figures 64-73, pp. 170-177 and 179-180, represent the worst case wind speed impacts, which all occur under southwest winds. As discussed below, impacts under northwest and westerly winds are not substantial. Measured wind-speed diagrams for these two wind directions are available for public review at the Office of Environmental Review, 450 McAllister St.



● FIGURE 63: Location of Hot Wire Anemometer Measurements

SOURCE: Dr. Bruce White



### Northwest Winds

Existing surface winds are below the comfort criterion of 11 mph, with the strong majority of winds less than 5 mph. Winds of about 8 mph occur in the Chevron Garden Plaza.

Similar surface wind speeds of 1 to 7 mph (i.e., all well below the comfort criterion) would occur for the tested scenarios; Alternative E or any combinations of Lincoln Plaza and 49 Stevenson would have little effect on the surface winds. This result is due most likely to the large mass of buildings (mostly highrises) upwind of the project site, which increase wind-friction resistance, thus reducing surface winds.

### West Winds

Existing surface winds at the existing setting at 2 to 5 mph all are well below the comfort criterion of 11 mph.

The surface winds in all the configurations tested would be less than 6 mph, also well below the comfort criterion. There would be an increase of wind speeds on Jessie St. between Alternative E and Lincoln Plaza for some of the configurations. However as previously mentioned, the resultant wind speeds would be less than 6 mph. These lower wind speeds are probably due, again, to the large mass of highrise buildings upwind of the project site.

### Southwest Winds

The area upwind of the project block currently contains few substantial buildings or sizable topographical features that would tend to alter the wind direction or retard the wind speed. As a result, the southwesterly winds have an unobstructed pathway to the project site. Additionally, the southwesterly wind direction nearly aligns with Market, Stevenson Jessie and Mission Sts., thus funnelling winds unhindered along these streets.

## VII. Alternatives

Existing surface winds are all below the comfort criterion of 11 mph (all are less than 5 mph except for 7.6 and a 5.4 mph wind speed measurements on Stevenson and Jessie Sts., respectively, see Figures 64-65, pp. 170-171). Each of the configurations is discussed individually below. In each discussion reference is made to the existing setting for comparative purposes.

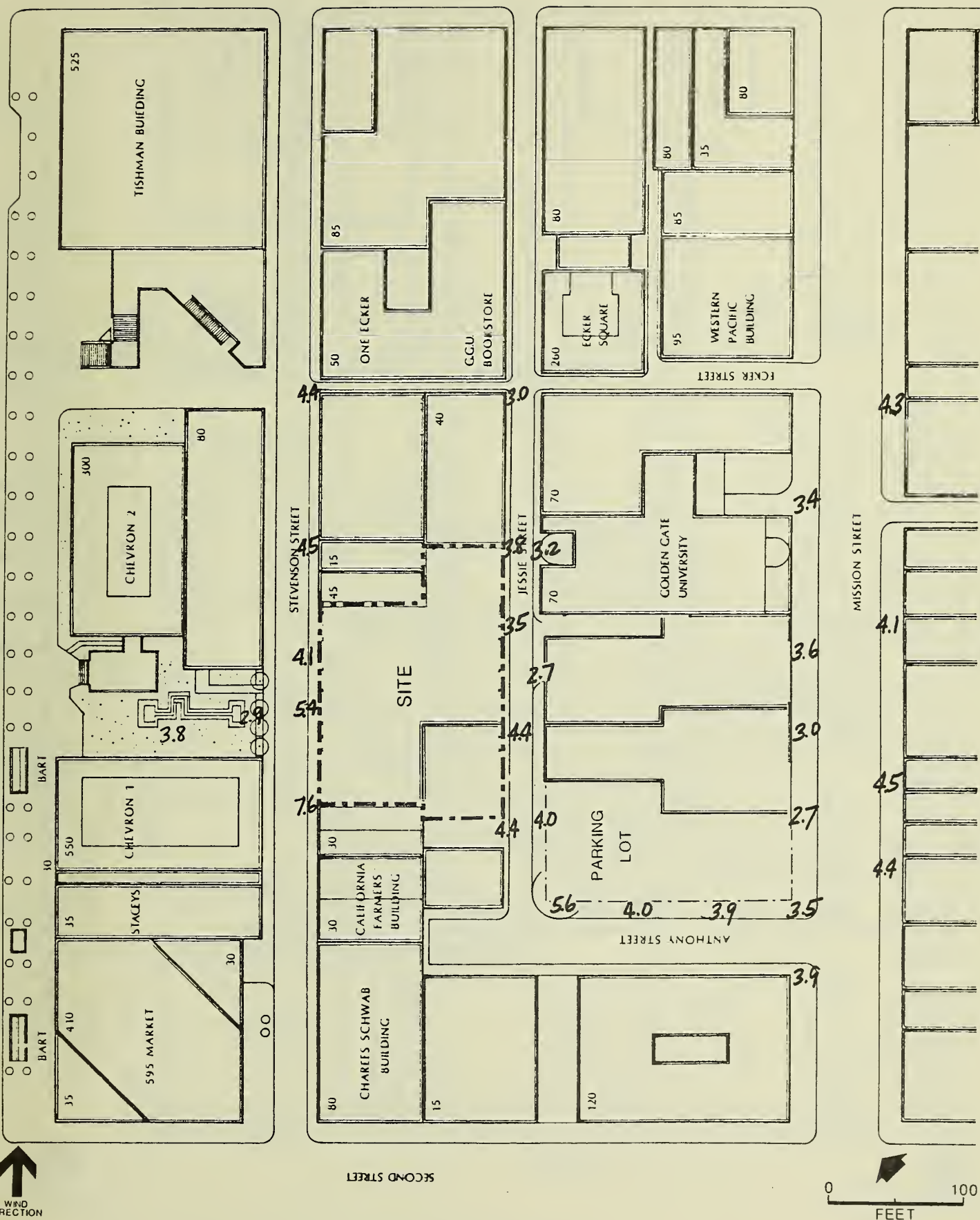
71 Stevenson (Alternative E) Alone: All wind speeds would be less than the comfort criterion of 11 mph except on the south side of Jessie St. across from the middle of the 71 Stevenson site, where the wind speed would be 11.8 mph. There would be effective increases to 7-8 mph, 8-12 mph, and 6-8 mph from 4-5 mph, 3-4 mph, and 3-4 mph, respectively, on Stevenson, Jessie and Mission Sts. (see Figures 66-67, pp. 172-173). Anthony St. and Chevron Garden Plaza winds would be approximately the same as those occurring in the existing setting.

71 Stevenson (Alternative E) with Lincoln Plaza: Winds adjacent to the 71 Stevenson and Lincoln Plaza sites on Stevenson, Jessie and Mission Sts. would double to quadruple in speed. Winds in these areas would exceed the 11 mph comfort criterion (see Figures 68-69, pp. 174-175). There would be effective increases to 10-11 mph, 12-15 mph, and 11-16 mph from 4-5 mph, 3-4 mph, and 3-4 mph, respectively, on Stevenson, Jessie and Mission Sts. This result is probably due to a channeling of winds between the buildings on these streets, thus accelerating wind speeds near the surface. Winds on Anthony St. would increase to 5-6 mph from 4-5 mph.

71 Stevenson (Alternative E) with 49 Stevenson: All wind speeds would be less than the comfort criterion of 11 mph except for wind on Jessie St. adjacent to 71 Stevenson, which would be 11.6 mph (see Figures 70-71, pp. 176-177). There would be effective increases to 4-7 mph, 8-12 mph, and 3-7 mph from 4-5 mph, 3-4 mph, and 3-4 mph, respectively, on Stevenson, Jessie and Mission Sts. Winds on Anthony St. would remain approximately the same as those occurring in the existing setting.

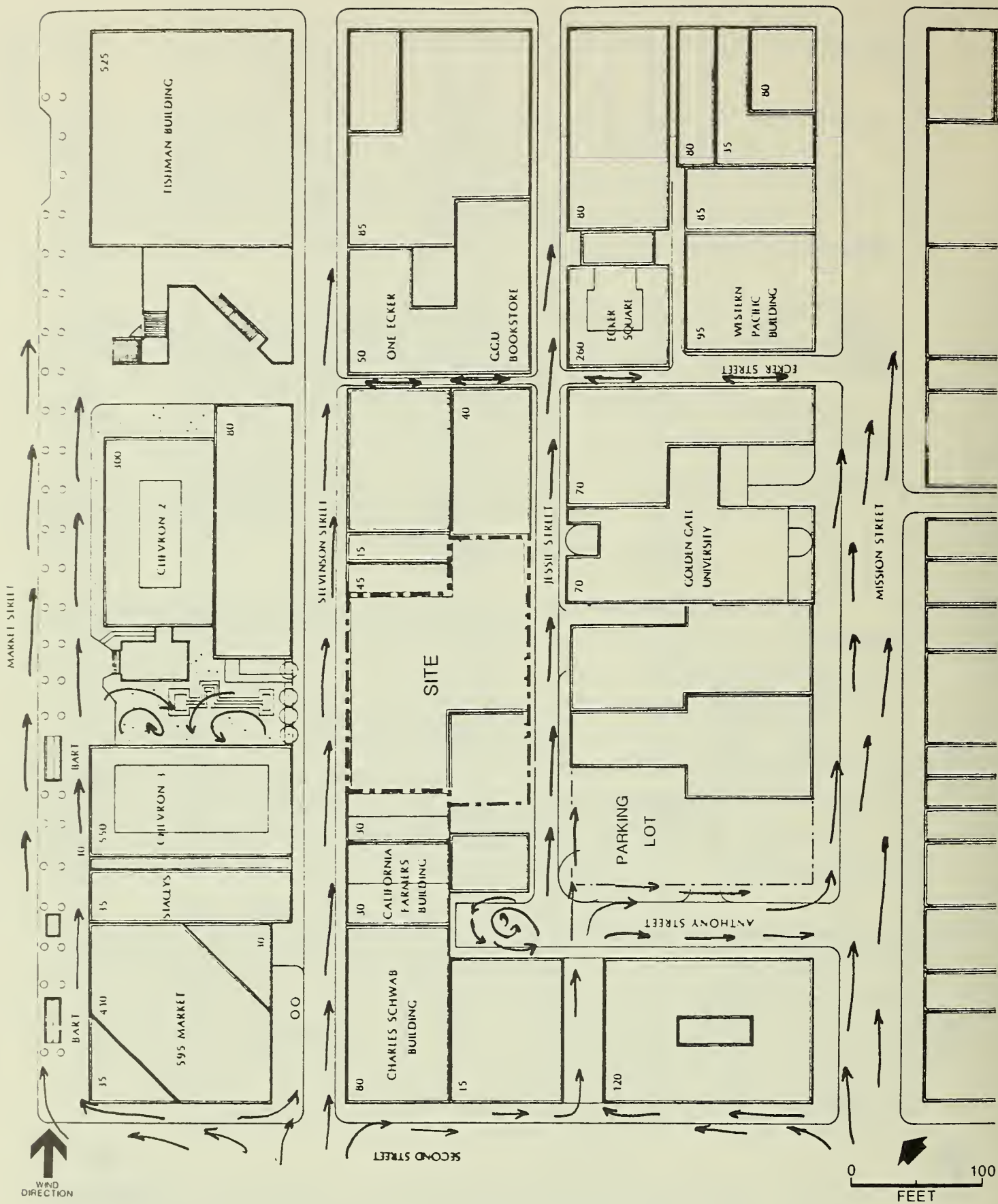
71 Stevenson (Alternative E) with Lincoln Plaza and 49 Stevenson: Winds on Jessie and Mission Sts. adjacent to 71 Stevenson and Lincoln Plaza would more than double to quadruple in speed. Winds on these two streets would exceed





● FIGURE 64: Existing Southwest Wind Speeds

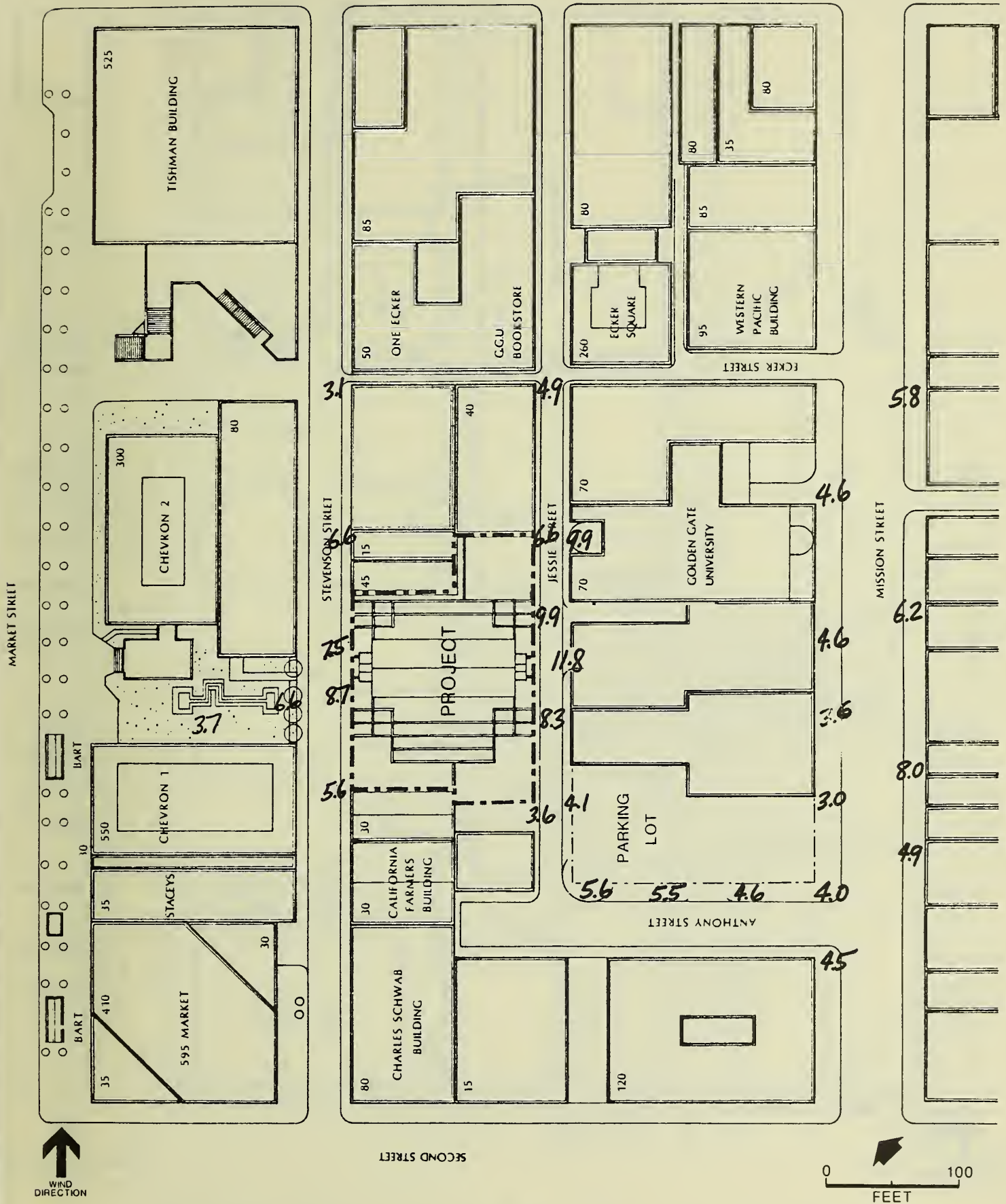
SOURCE: Dr. Bruce White



● FIGURE 65: Existing Southwest Wind Directions

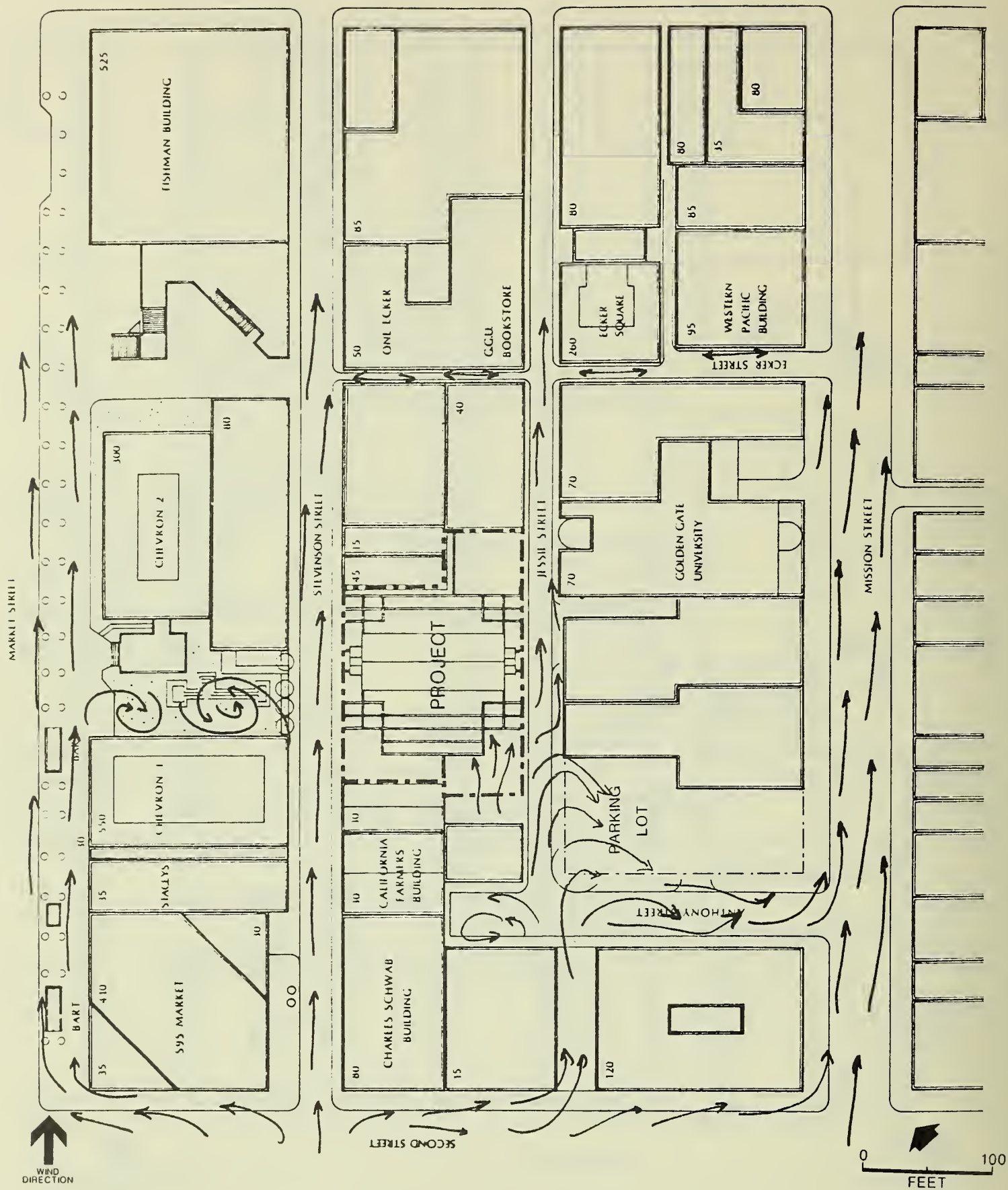
SOURCE: Dr. Bruce White





● FIGURE 66: Southwest Wind Speeds - Alternative E

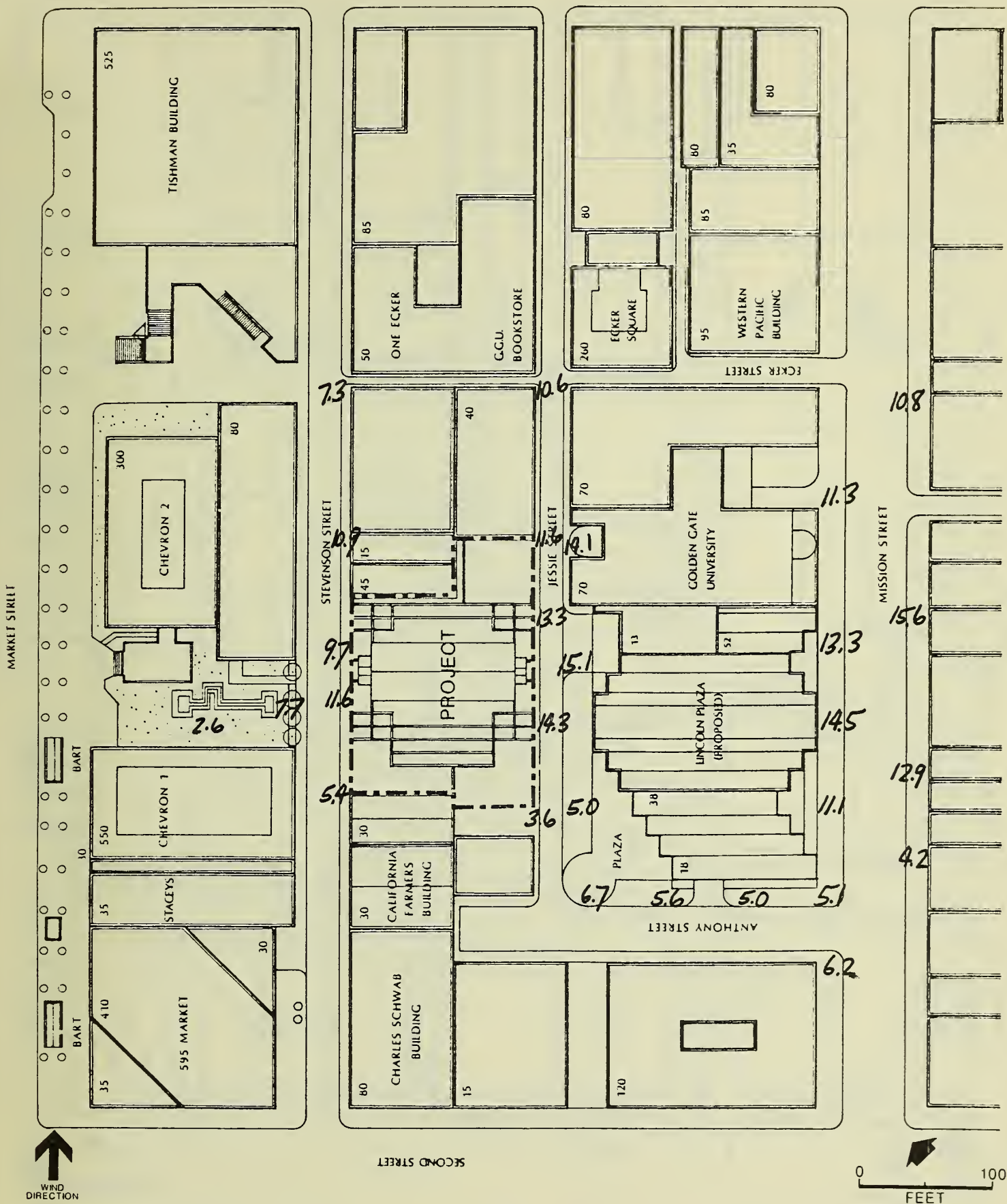
SOURCE: Dr. Bruce White



● FIGURE 67: Southwest Wind Directions - Alternative E

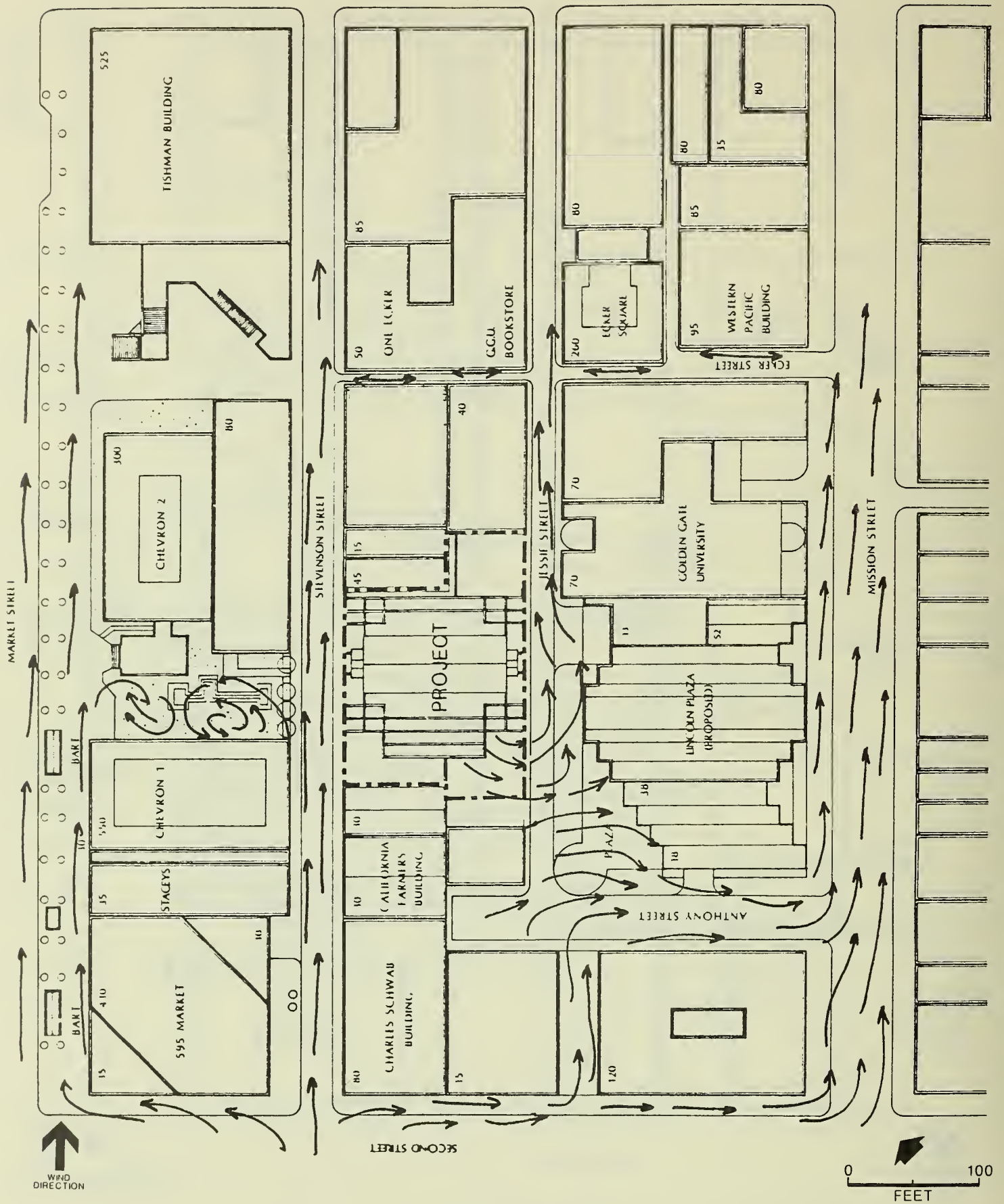
SOURCE: Dr. Bruce White





● FIGURE 68: Southwest Wind Speeds -  
Alternative E and Lincoln Plaza

SOURCE: Dr. Bruce White

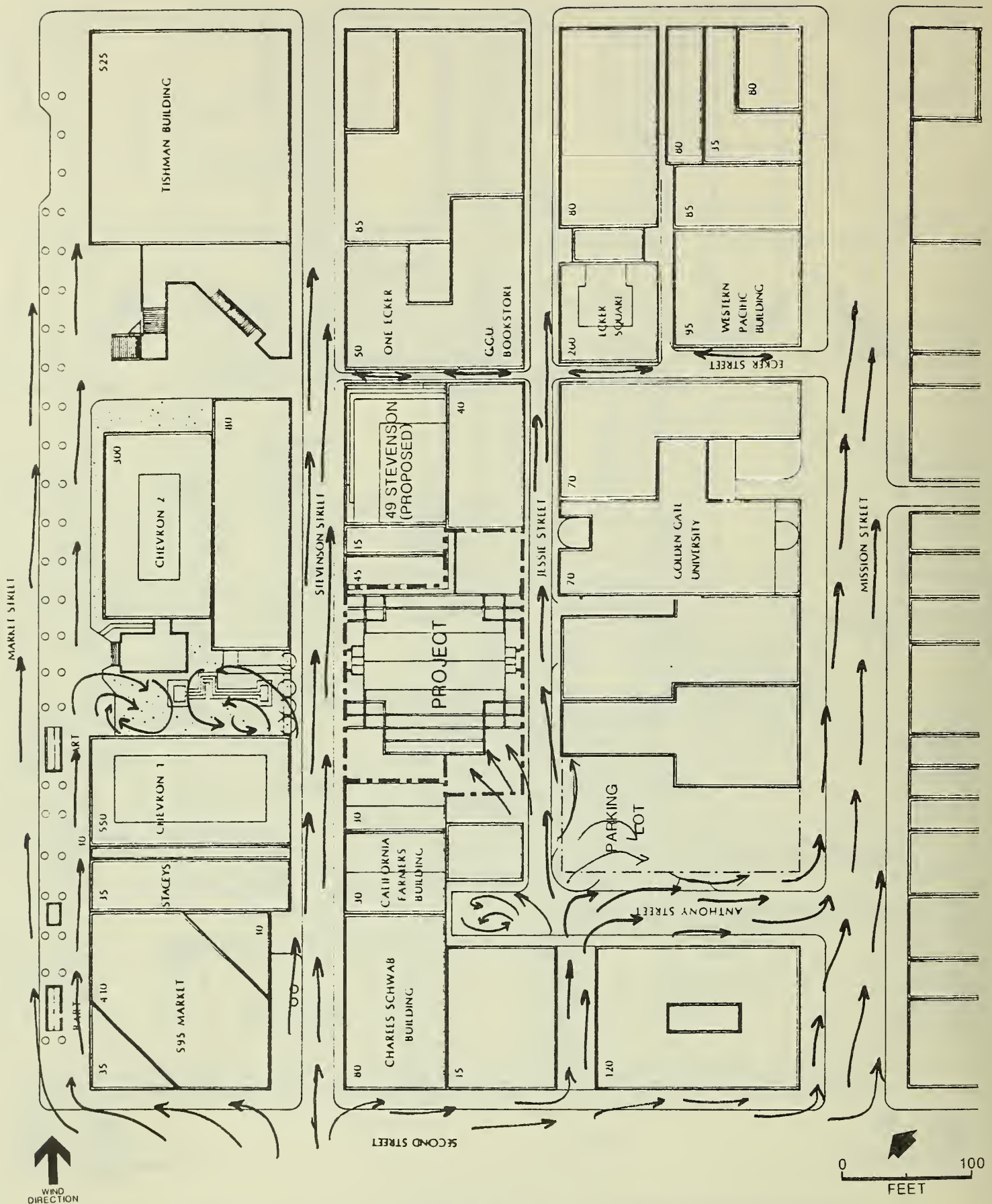


● FIGURE 69: Southwest Wind Directions -  
Alternative E and Lincoln Plaza

SOURCE: Dr. Bruce White







● FIGURE 71: Southwest Wind Directions -  
Alternative E and 49 Stevenson

SOURCE: Dr. Bruce White



the comfort criterion of 11 mph (see Figures 72-73, pp. 179-180). There would be increases to 8-11 mph, 13-15 mph, and 12-15 mph from 4-5 mph, 3-4 mph, and 3-4 mph, respectively, on Stevenson, Jessie, and Mission Sts. Winds on Anthony St. would increase to 5-6 mph from 4-5 mph.

#### Summary of Wind Effects

As indicated above, the primary objective of the additional (current) wind effort was to measure and evaluate the ground-surface wind impacts of three proposed buildings on AB 3708, alone and/or in combination. Seven combinations, or "scenarios", including the existing setting, were tested. Details are presented in Wind-Tunnel Studies of the 71 Stevenson Street Project by Bruce White, available for review at the Office of Environmental Review, 450 McAllister St., 5th Floor.

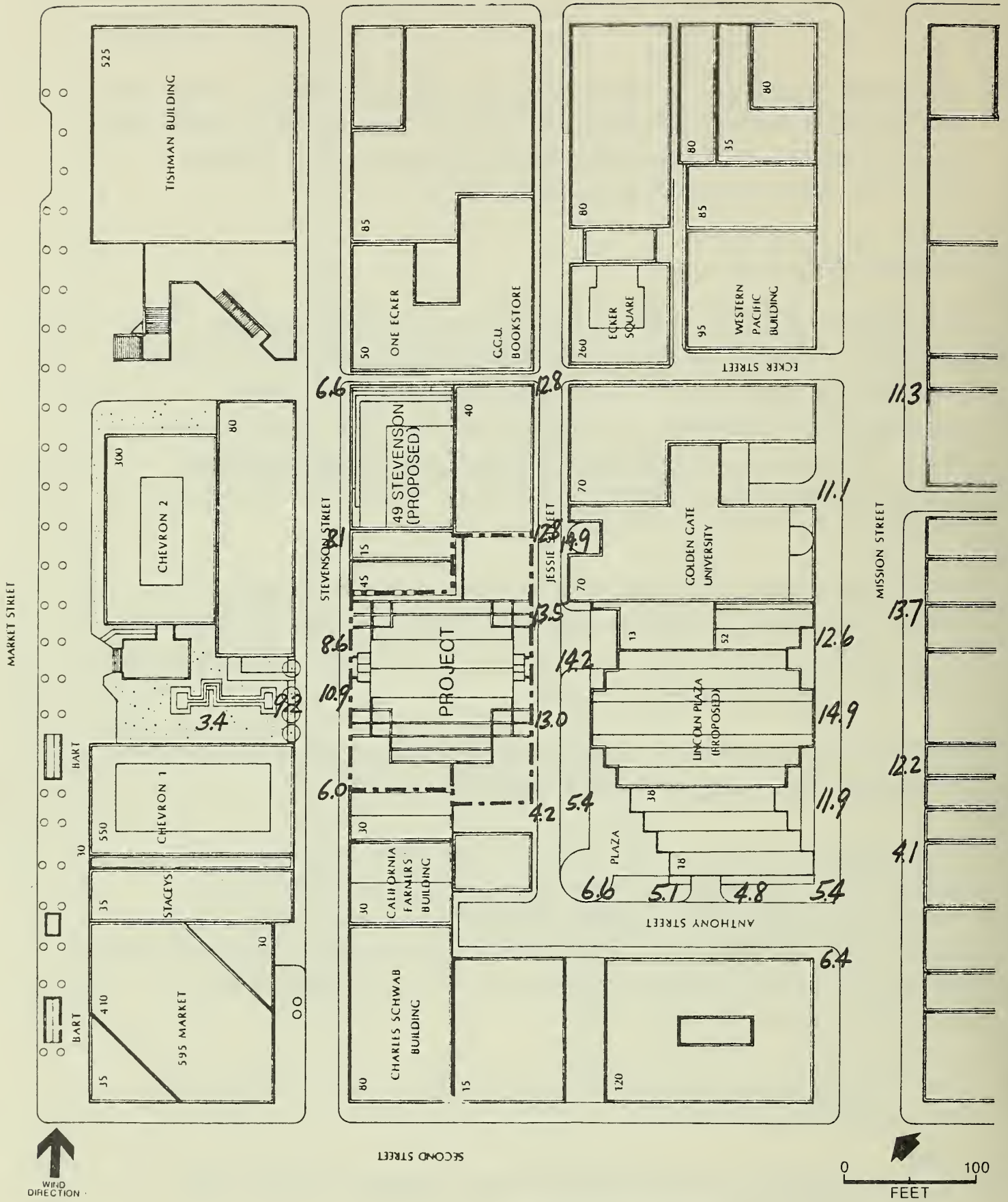
In the current study, the emphasis is on ground-surface wind speeds, rather than wind-speed ratios. For calculation of wind speeds, the free-stream wind speed used here was, for each of the three wind directions tested, the average summer free-stream wind speed at 4 p.m.

For the sake of completeness, wind speeds and wind-speed ratios are presented (in separate figures) in Dr. White's report (op. cit.).

The primary evaluation was directed to locations at which average ground-surface wind speeds on summer afternoons at 4 p.m. exceeded the "comfort criterion" level of 11 mph, and to possible locations at which wind speeds during the same periods exceeded the "hazard criterion" level of 35 mph more than 5% of the time (mean ground-surface wind speed about 25 mph, depending on wind direction).

The following results have been derived from examination of the report by Dr. Bruce White:

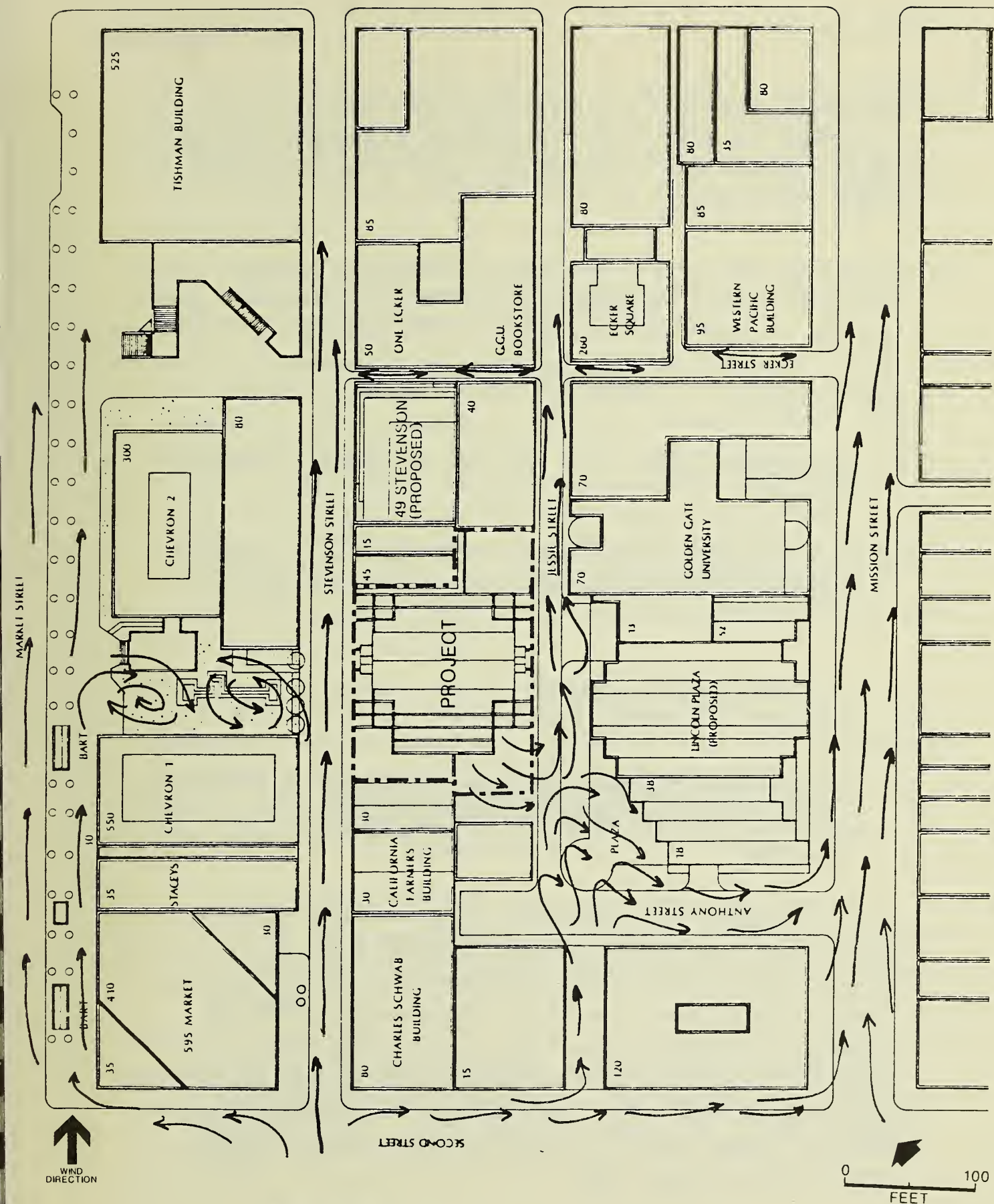
1. In no situation (any wind direction) was the hazard criterion level (25 mph mean wind speed) approached.



● FIGURE 72: Southwest Wind Speeds -  
Alternative E, Lincoln Plaza and 49 Stevenson

SOURCE: Dr. Bruce White





● FIGURE 73: Southwest Wind Directions -

SOURCE: Dr. Bruce White

Alternative E, Lincoln Plaza and 49 Stevenson

## VII. Alternatives

2. As expected, southwest (SW) winds were much more important than west (W) or northwest (NW) winds. In no situation did W or NW winds approach the comfort criterion level. W and NW winds could therefore be omitted from further consideration.
3. For SW winds, which are aligned with the direction of Stevenson, Jessie and Mission Streets, the comfort criterion level was exceeded at several locations for several of the scenarios. While the comfort criterion level was never reached in the existing setting, it was exceeded as follows for other scenarios:
  - a. 71 Stevenson alone: at one location along Jessie St. (slightly -- at 11.8 mph);
  - b. 71 Stevenson with Lincoln Plaza: at 12 locations, one along Stevenson, five along Jessie, and six along Mission (maximum 15.6 mph);
  - c. 71 Stevenson with 49 Stevenson: at one location, along Jessie St. (slightly -- 11.6 mph);
  - d. 71 Stevenson with Lincoln Plaza and 49 Stevenson: at 13 locations, six along Jessie and seven along Mission (maximum 14.9 mph -- at two locations);

Thus, 71 Stevenson alone produced one location at which the comfort criterion level was exceeded slightly (by about 1 mph), and the situation did not change with the addition of 49 Stevenson. Lincoln Plaza alone produced three locations at which the comfort criterion level was exceeded, by a maximum of about 1 mph. Lincoln Plaza with 71 Stevenson produced 12 locations at which the comfort criterion level was exceeded, by a maximum of about 5 mph. The addition of 49 Stevenson to the pair added one location (total 13), with a maximum exceeding the comfort criterion level by about 4 mph.



Stevenson Street would remain quiescent. 71 Stevenson by itself produced no locations approaching the comfort criterion level. Only when 71 Stevenson was modeled with Lincoln Plaza was there a noteworthy effect along Stevenson Street: one point at 11.6 mph, slightly above the comfort criterion level.

Chevron Plaza also would remain relatively calm. Winds there did not approach the comfort criterion level in any scenario.

4. It appears that there would be no wind problems in the open lobby of 71 Stevenson, with its openings to Stevenson and Jessie Streets. Winds, measured at both openings, were under 6 mph for W and NW winds under all scenarios. With SW winds, the comfort criterion level was exceeded slightly (at 11.6 mph) at only one lobby-access location (along Stevenson), for the 71 Stevenson / Lincoln Plaza combination. The fact that the wind speed at the other entrance, on Jessie, was measured at 3.6 mph in this scenario appears to preclude the possibility of strong or gusty winds through the lobby.
5. The measured wind speeds described above (maximum of 15.6 mph, against a maximum of 7.6 mph in the existing setting) can be put into perspective by examination of wind speeds determined in wind-tunnel testing (under identical methodology) of other proposed projects in the Downtown. All cited speeds are for the existing settings at the following locations:
  - a. In the Post-Mason (Olympic Club) Hotel study, a wind speed of 20.7 mph was measured at the northwest corner of the intersection of Sutter and Mason Sts. (Post-Mason Hotel Draft EIR, 81.400E, April 15, 1983)
  - b. In the 580 California St. study, a wind speed of 18.2 mph was measured across the northern half of the intersection of California and Kearny Sts. (580 California St. Final EIR, 81.705E, January 6, 1983)

## VII. Alternatives

- c. In the 222 Kearny St. study, a wind speed of 12.7 mph was measured on the east side of the intersection of Sutter and Kearny Sts. (222 Kearny St. Draft EIR, 81.687E, March 11, 1983)
- d. In the Bank of Canton study, a wind speed of 12.5 mph was measured at the three-way intersection of Washington and Montgomery Sts. and Columbus Ave. (Bank of Canton Final EIR, EE 80.296, July 15, 1982)

### Mitigation

Mitigating measures that should reduce wind speeds on Stevenson, Jessie and Mission Sts. would be a significant set-back on Jessie and Mission Sts., of both Alternative E and Lincoln Plaza. A set-back of 49 Stevenson would probably not be necessary because it would have a negligible effect on the wind environment. A reduction in the overall size (square footage) of both the Alternative and Lincoln Plaza also could reduce the street-level wind speeds. Changing of massing and building orientation probably could reduce street-level wind speeds. However, such design changes could be measured and validated only in additional wind-tunnel testing.

If there is an increased scale of development directly upwind of the proposed sites (to the southwest) involving high-rise structures, potentially the wind environment on Stevenson, Jessie and Mission Sts. would be improved.

### HOUSING

This alternative, with 335,450 sq. ft. of office space, would have a housing demand, based on the OHPP guidelines, of 298 units. These, or their equivalent in housing credits in conformance to OHPP guidelines, would be provided as described in the EIR for the project.

### TRANSPORTATION

There would be a statistically insignificant increase in transit ridership and vehicle trip ends generated with this alternative as compared to the project.



## VII. Alternatives

This Alternative would have 75 parking spaces, 68 of which would be short-term spaces. Alternative E would meet the existing and project- related on site parking short-term parking demand.

Peak-hour vehicle trip ends and Muni-ridership would increase by about 1%. This represents 11 more vehicle trip ends and 9 Muni riders.

The effect of alternative-related pedestrian and vehicle trips on the operation of crosswalks and travel lanes at the intersection of Mission and First Sts. would, as with the project, be unnoticeable.

### ENERGY /1/

This alternative would consume about 3.3 million kilowatt-hours (kwh) of electricity annually, or about 275,000 kwh per month. Peak electrical demand would be about 1,140 kw, and would occur between 8:00 a.m. and 5:00 p.m. in the fall. PG&E's systemwide peak electrical demand would occur in August, when the project's peak demand would be less than 1,110 kw.

The alternative would consume about 1.8 million cubic ft. (1.91 billion Btu) of natural gas annually, or about 159 million Btu per month. Natural gas use would peak between 6:00 and 9:00 a.m. on January mornings as the hot water boilers begin heating the building.

The alternative would consume a total of an estimated 35.5 billion Btu annually. The projected per-sq.-ft. electricity requirement, 0.87 kwh per month, would be less than an average of the estimated per-sq.-ft. requirement of 1.4 kwh per month estimated for 16 other proposed developments (see Appendix F, p. 354). The projected per-sq.-ft. natural gas requirement, 1,170 Btu per month, is less than an average per-sq.-ft. requirement of 2,200 Btu per month estimated for the 16 other proposed developments. The alternative's projected total annual per-sq.-ft. energy requirement, about 111,300 Btu, would be about 47% less than the average of 213,000 Btu per month projected for the 16 other developments.

## VII. Alternatives

In addition, a solar heating system is being considered for domestic water heating.

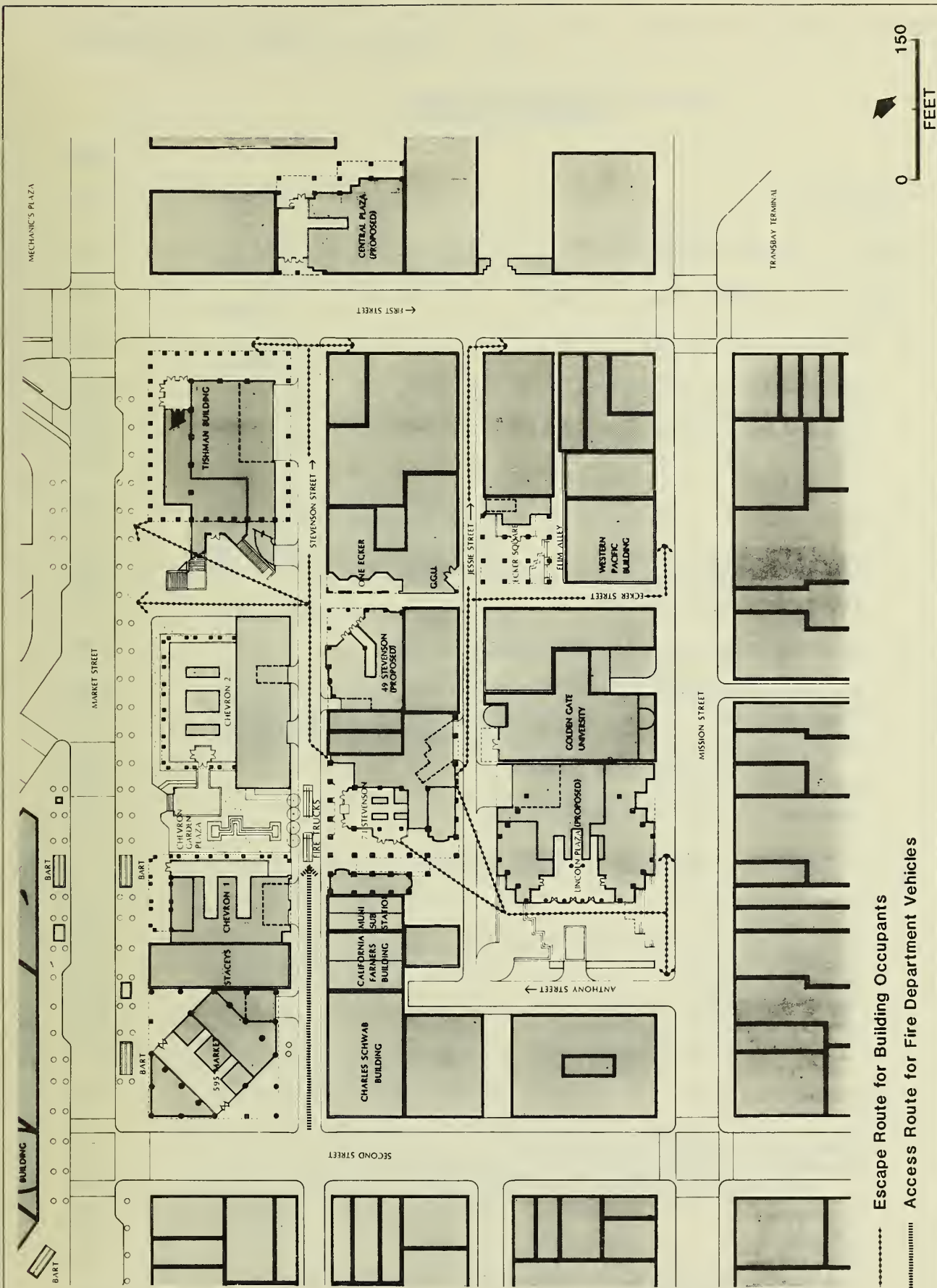
### FIRE/HAZARDS

In the course of design of this alternative, the Fire Department was consulted as to its preferred emergency access/evacuation routes. The Department indicated that Stevenson St. would be the preferred emergency access route for fire trucks, but that people in the building should be directed to Jessie St. This scheme would minimize potential conflicts between emergency vehicles and people leaving the building. The stairwells in this alternative have thus been designed to open onto the Jessie St. side of the site at street level (see Figure 74, p. 186). Stevenson St. is 40-ft. wide, property line to property line, and is of adequate width to accommodate emergency vehicles. The Fire Department has reviewed the design in conjunction with the Lincoln Plaza and 49 Stevenson proposals and has indicated its approval.

### NOTES - Alternative E

/1/ A computerized energy analysis using the Trace Version 500 program was performed by the project engineers, Glumac & Associates. Building occupancy was assumed to be 26 days per month; heating system efficiency was assumed to be 70%; lighting was estimated at two watts per sq. ft.; and wall receptacle loads were estimated at 0.5 watts per sq. ft.





● FIGURE 74: Emergency Access/Evacuation Routes—  
Alternative E, Including Lincoln Plaza and  
49 Stevenson

SOURCE: Kaplan/McLaughlin/Diaz

## VIII. Summary of Comments and Responses

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I. INTRODUCTION

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This document contains summaries of the public comments received on the Draft Environmental Impact Report (DEIR) prepared for the proposed 71 Stevenson St. Office Building, and responses to those comments.

All substantive comments made at a public hearing before the City Planning Commission on November 18, 1982, and all written comments received during the public review period from October 15, 1982 through November 18, 1982, have been reviewed and are presented herein by direct quotation, edited to omit repetition and nonsubstantive material only.

Comments and responses are grouped by subject matter and are arranged by topics corresponding to the Table of Contents in the Draft EIR. Each group of comments is followed by its set of responses; the order of the responses under each topic follows the order of the comments under that topic. As the subject matter of one topic may overlap that of other topics, the reader will occasionally be referred to more than one group of Comments and Responses to review all information on a given type of comment. Where this occurs, cross references are provided.

These comments and responses will be incorporated into the Final EIR as a new chapter. Text changes resulting from comments and responses will also be incorporated into the Final EIR, as indicated in the responses.

## VIII. Summary of Comments and Responses

### II. LIST OF PERSONS COMMENTING

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#### San Francisco City Planning Commission

Susan Bierman  
Yoshio Nakashima  
Norman Karasick

Robin Calhoun, Director, San Francisco Public Utilities Commission (Memorandum dated October 22, 1982)

Darnell Reynolds, CEQA Coordinator, Caltrans, District 04 (Memorandum dated November 9, 1982)

Sue Hestor, Attorney, San Franciscans for Reasonable Growth (Hearing Testimony and Letter dated November 21, 1982)

David Jones, San Franciscans for Reasonable Growth (Letter dated November 21, 1982)

Sue Hestor submitted comments by herself, San Franciscans for Reasonable Growth and David Jones which were originally submitted as comments on other Draft EIRs (135 Main St. Draft EIR Supplement, 580 California St. Draft EIR and 333 Bush St. Draft EIR). Where necessary, these comments have been revised to apply to the 71 Stevenson St. Draft EIR.



III. SUMMARY OF COMMENTS AND RESPONSES

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A. PROJECT DESCRIPTION

SPONSOR'S RATE OF RETURN

Comment

"Page 6 - Objectives - what are the financial objectives of sponsor in terms of rate of return?

"What is an adequate rate of return? How do we tell whether additional mitigation is feasible economically without that information?" (Sue Hestor)

Response

What a developer may consider an adequate rate of return may vary over time in a fluctuating market with varying degrees of risk. A sponsor's rejection of mitigation measures for economic reasons may be considered by the decision-making body in its review of the EIR, but does not constrain the imposition of measures by that body.

PROJECT SCHEDULE

Comment

"Page 13 - that is an unrealistic schedule." (Sue Hestor)

Response

The project schedule has been revised to reflect delays in progress. The last paragraph on p. 13, continuing on p. 16 of the DEIR (first paragraph of the FEIR), has been revised as follows:

## VIII. Summary of Comments and Responses

"Environmental review and project design are scheduled by the project sponsor to be completed by late 1983. Following approval of permits, site clearance and excavation would require about 14 weeks, foundation about 8 weeks, structural steel and cladding about 34 weeks, and finishing about 44 weeks. Several of these periods overlap, and the entire construction period would be about 1.5 years. Initial occupancy is projected for early 1985 with full occupancy in mid-1985. Construction costs are estimated at \$29.5 million (1982 dollars)."

### DESCRIPTION OF SITE LOCATION

#### Comment

"Location - line 4 - those are not streets, to city standards for streets, but alleys. Describe the 'streets' around site in terms of city standards for capacity, sidewalk capacity, etc.

"What is the current density on that block in terms of people (include full population of Golden Gate)? Compare it to other downtown blocks. What is the current density in terms of FAR? Compare it to other blocks downtown.

"Site needs adequate description as interior lot with distance to major thoroughfares. This is an incredibly unusual site on which to build. State that fact and describe the implications of such density in block interiors.

"Page 8 - What are the street widths and sidewalk widths on the various blocks/alleys/streets here?" (Sue Hestor)

"Page 7. Put Stevenson and Jessie Sts. designations on the map." (Susan Bierman)

#### Response

Section 102.1 of the San Francisco City Planning Code defines an alley as "A right-of-way, less than 30 feet in width, permanently dedicated to



## VIII. Summary of Comments and Responses

common and general use by the public." Section 102.21 defines a street as "A right-of-way, 30 feet or more in width permanently dedicated to common and general use by the public, including any avenue, drive, boulevard, or similar way, but not including any freeway or highway without a general right of access for abutting properties." The code does not define sidewalks.

Sidewalks on Stevenson St. are 8 ft. wide. The northerly "sidewalk" (the Department of Public Works does not recognize this as a sidewalk) on Jessie St. in the area of the site is 3 ft. wide (see p. 37 of the EIR, first paragraph under the heading "Pedestrians"); Jessie St. has no southerly sidewalk in the site area. The southerly sidewalk on Jessie St. between First and Ecker Sts. is 5 ft. wide. Ecker St. is 10 ft. wide (property line to property line) at its narrowest portion (see p. 37 of the EIR, second paragraph under the heading "Pedestrians"). It is 25 ft. wide between Mission St. and Elim Alley, with a 5-ft. sidewalk on the easterly side, and 15 ft. wide between Jessie St. and Elim Alley with a 5-ft. sidewalk on the easterly side. Anthony St. has sidewalks 10 ft. wide (westerly side) and 13 ft. wide (easterly side). The First, Mission and Second St. sidewalks are 15 ft. wide. The Market St. sidewalk is 30 ft. wide.

Stevenson St. in the project block is 24 ft. wide curb to curb; Jessie St. is 16.5 ft. between First and Ecker Sts., and 20 to 25 ft. wide along its remaining length. Figure A, p. 197, shows dimensions of sidewalks and streets in the project block.

The site is 330 ft. from Second St., measured from the midpoint of the site on Stevenson St., and 615 ft. from First St. The site is about 380 ft. from Mission St. (measured from the Jessie St. midpoint) via Anthony St., and about 900 ft. from Mission St. via First St.; about 430 ft. from Mission St. via Ecker St.; and about 720 ft. from First St. It is about 450 ft. from Market St. via Ecker St. (Tishman Plaza).

The City does not define sidewalk or street capacities. Sidewalk and street capacities vary because of dimensions, obstructions, etc.





## VIII. Summary of Comments and Responses

Capacities are determined through various methodologies. The methodologies shown in the EIR are accepted by the City. The EIR also provides definitions of Levels of Service for both pedestrian and vehicular traffic, which have been accepted by the City.

The population of the project Assessor's Block is not known exactly; on the basis of the number of sq. ft. by use, there are currently about 13,000 office workers (in about 3.2 million sq. ft.), and about 200 retail, restaurant and other employees (in about 100,000 sq. ft.). This estimate does not take into consideration any buildings which may be vacant. The project Assessor's Block contains about 26,000 sq. ft. of printing, automotive repair, warehouse and parking area; these uses have fewer employees per sq. ft. than office and retail uses. As stated on p. 30, first paragraph under the heading "On-Site Employment", the site, which contains parking and warehouse space, currently has 5 employees. Professional Color Lab, at 96 Jessie St., has about 30 employees (Hannah Schmidt, Vice President, telephone conversation, March 7, 1983). In the 1982 fall session (fall is the most heavily attended session), Golden Gate University had a daytime student population of about 1,000 and an evening population of about 5,000 (Michael Stublarec, Registrar, telephone conversation, March 7, 1983).

Block 3707 is located directly southwest (westerly) of the project block. It is similar in terms of land area to the project block; the project block contains 400,000 sq. ft. of land area and Block 3707 contains about 330,000 sq. ft. of land area (blocks north of Market St., and blocks northeast (easterly) of the project block on the south side of Market St., are smaller). Block 3707 has been the site of less development activity than the project block; it contains several highly rated structures including the Sheraton Palace Hotel, the Monadnock Building, the Call Building, the Bank of America Building and others which are less likely to be proposed for redevelopment. Block 3707, after completion of the 90 New Montgomery Building, will have about 4,000 office workers in about one million sq. ft. of space; and about 600 retail, restaurant, banking and other employees in about 300,000 sq. ft. of space. The Sheraton Palace Hotel, which occupies a major site in the center of this block, has about

## VIII. Summary of Comments and Responses

450 employees; this number varies with types of functions using the hotel (Francie Goo, Director of Personnel, telephone conversation, March 7, 1983). The block contains a small two-story residential hotel and parking uses. The number of employees for these uses is not known, but is not expected to be large.

In comparison, the project Assessor's Block (as noted above) has a daytime population of about 14,000, while Block 3707 has a population of about 5,000 (this does not include guests of the hotel). The project block has an existing Floor Area Ratio (FAR), including all uses, of 9:1. Block 3707 has an FAR of 6:1. If the One New Montgomery Place proposal is approved, Block 3707 would have an FAR of 7:1. Office uses comprise about 90% of all uses on the project block compared to about 40% of Block 3707; hotel uses comprise 25% of Block 3707. Retail uses comprise about 1% of the project block and more than 10% of Block 3707. Parking comprises about 1% of the project block and 15% of Block 3707.

Comparisons of Floor Area Ratios (FAR) for various downtown blocks\* to those of the project block (including the project, 49 Stevenson St. and Lincoln Plaza, all as currently proposed) are given below. The project block FAR with the project but without the Lincoln Plaza and 49 Stevenson proposals would be about 10:1.

<u>Block</u>	<u>FAR</u>	<u>Block</u>	<u>FAR</u>
207 (TransAmerica)	8.8 :1	230 (Embarcadero One)	12.5 :1
259 (Bank of America)	18.35:1	3749 (Marathon)	5.23:1
263 (101 California)	17.2 :1	267 (Shell Building)	9.6 :1
288 (333 Bush/101 Mont./ Hallidie	12.5 :1	3709 (Five Fremont / Central Plaza)	15.8 :1
3717 (150 Spear/100 Spear/ 160 Spear)	12.16:1	261 (333 California / Dollar Block)	16.17:1
		3708 (Project Block)	11.0:1

\* The buildings in parentheses following the block numbers are for identification and are not necessarily the only buildings on the blocks.



## VIII. Summary of Comments and Responses

The first sentence of the second paragraph on p. 6 of the EIR has been revised to include the description of the site as being on the interior of the block. The sentence now reads as follows:

"The project site is located in the interior of Assessor's Block 3708, ...".

The last sentence on p. 6 states that the site is half a block away from Market St. This sentence has been revised to read as follows:

"The site is half a block away (about 450 ft.) from Market St., ...".

The following has been added to the end of the first paragraph on p. 9 of the EIR:

"The site is located about 400 ft. from Mission St., about 700 ft. from First St., and about 300 ft. from Second St."

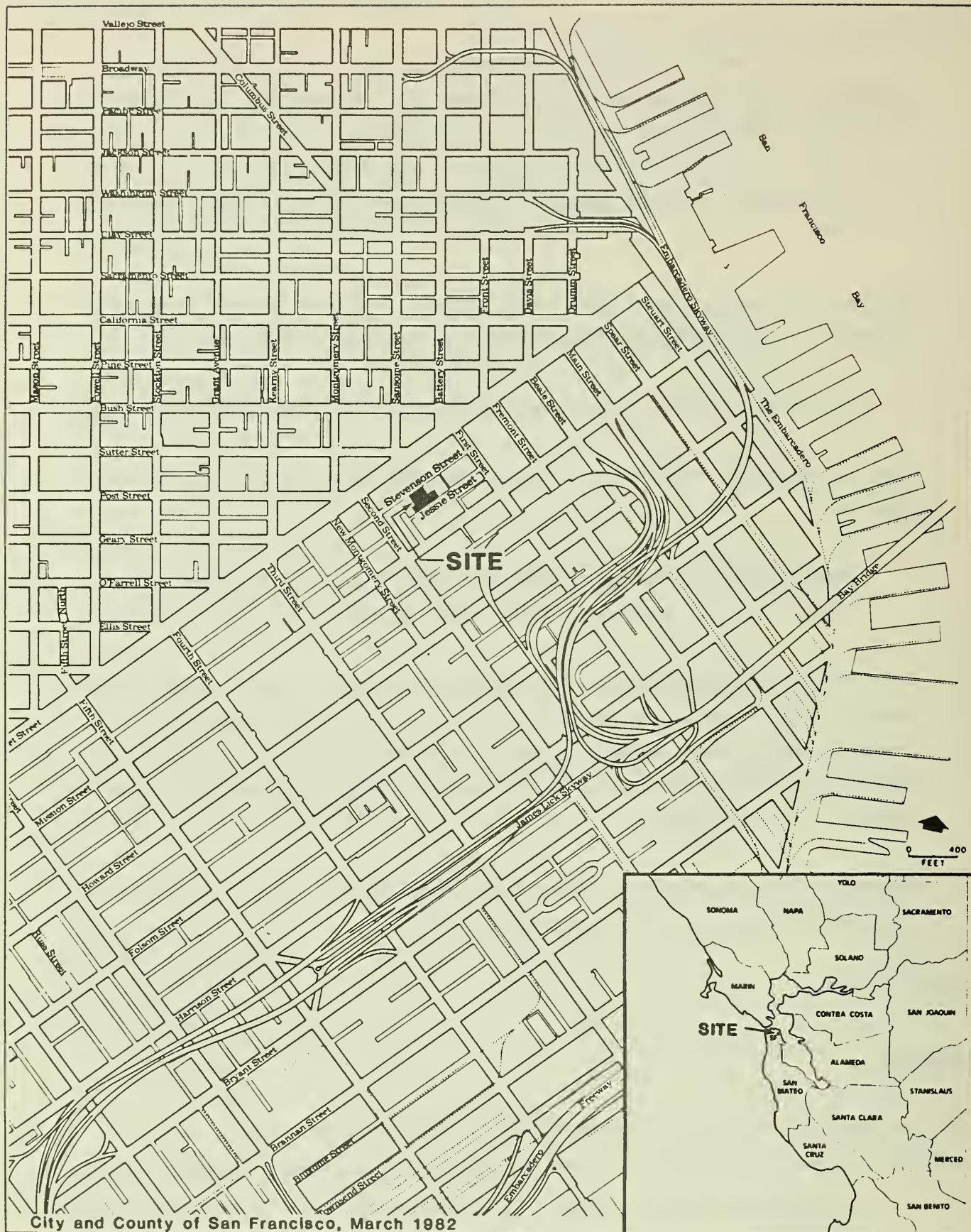
The effects (implications) of the project in terms of urban design, shadows, employment, vehicle and pedestrian traffic and circulation, transit, energy use, seismicity and growth inducement are described in Chapter IV, beginning on p. 47. The analysis takes into consideration the location of the project.

Stevenson St. and Jessie St. have been designated on Figure 1, p. 7 of the EIR (see Figure 1, p. 201 of this chapter).

### COLOR OF GLASS

#### Comment

"On the design, are sponsors planning Glass A and Glass B as different colors? It was a little hard for me to figure out." (Susan Bierman)



SOURCE: Environmental Science Associates, Inc.

● FIGURE 1: Project Location



## VIII. Summary of Comments and Responses

### Response

Glass A and Glass B are intended to be different, but whether or not they would be different hues of the same color or different colors altogether has not been determined. As stated on p. 13 of the EIR, third paragraph, third sentence, "The curtain wall would contain colored glass spandrels of alternating light and medium tones."

### B. LAND USE

#### USES IN PROJECT AREA

### Comment

"Final Initial Study - page 7 - omission of land use compatibility issue is ridiculous - this is land use in interior block with low rise development south of Market. There is a university nearby. This should not have been left out.

"Page 18 - or one other similar map - describe what goes on in each of the buildings on the various lots.

"Predominant land uses on the alleys are not what is described here. Tell us what is on the interior blocks in the south of Market, on blocks north and south of Mission.

"Also add into list of projects in area 90 New Montgomery, Citicorp, Central Plaza, the Lincoln property and all others within 1/2 mile.

"Page 17 - Why is the warehouse vacant?" (Sue Hestor)

"Page 8. On the map, please describe One Anthony Place, the proposal, particularly a picture of the buildings that are now on the site where One Anthony Place will be. Also, any plans of plazas that they may be having joining this project.

## VIII. Summary of Comments and Responses

"Page 12. Please explain the City-owned driveway on the plaza. How much of the plaza space on the left of the project to the west is City owned? What procedures are necessary for it to be part of the project, and why do the sponsors seem to act as though it's already theirs?

"Page 50. What is the City-owned building west of the site? The EIR also doesn't give a clear picture of auto use and need where the decorative pavement is proposed for the driveway. I couldn't understand that. I think they're talking about using it essentially for a plaza, and it wasn't clear to me how much need there is to be maintained as a driveway." (Susan Bierman)

### Response

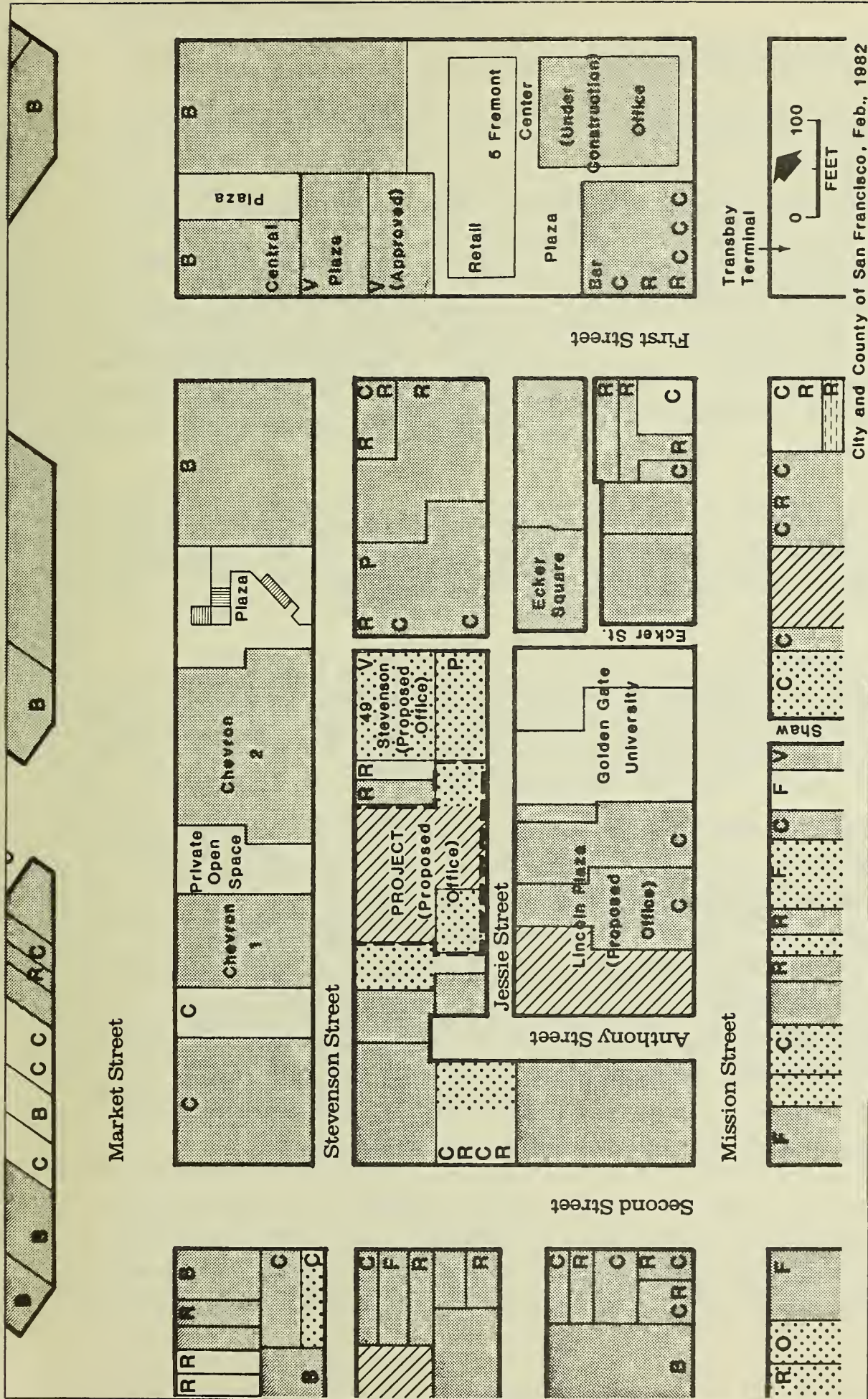
Figure 7a, Land Use in the Project Vicinity, has been added to the EIR as p. 17a, and is included here as p. 204.

The following reference has been added at the end of the first sentence of the third paragraph on p. 17:

"(see Figure 7a, p. 17a)".

The EIR states, on p. 17, third paragraph, "Predominant land uses in the project vicinity consist of office, retail and various service and educational uses." The description does not state that these uses predominate on alleys in the area, but refers rather to overall uses. As stated in the response on p. 199, under the heading "Project Description", office uses comprise about 90% of the uses on the project block. Thus, the EIR description of office as one of the predominant land uses in the project vicinity is correct. Along the north side of Stevenson St. are three major office developments, 595 Market, the Chevron towers and the Tishman Building, as well as Stacey's Bookstore. The Chevron and Tishman Buildings and Stacey's Bookstore have loading and parking entrances on Stevenson St. Also on that side of Stevenson are two plazas: Chevron Garden Court and Tishman Plaza. On the southerly (project site) side of Stevenson St. are four ground-floor restaurants (The Haven, Ecker Ecker Ecker, Yank Sing and Vince's Beef House), three of which are in buildings





**LEGEND** NOTE: Letters indicate use on ground floor only.  
Patterns indicate use on ground floor or upper levels.

- Office
- Warehouse, Light Industry
- Parking Garage/Lot
- Residential
- Bank
- Printer
- Commercial
- Restaurant
- Furniture Store
- Vacant
- Office

● FIGURE 7A: Land Use Map

SOURCE: Environmental Science Associates, Inc.



## VIII. Summary of Comments and Responses

with offices above; the Muni substation adjacent to the west side of the project site, three all-office buildings, a furniture store, and the parking garage on the site.

On Jessie St. are a bookstore with office above, a small restaurant, the Ecker Sq. office building, the warehouse on the site and the rear and loading entrances of several other buildings, including Golden Gate University and the office buildings and parking lot on the Lincoln Plaza site. The EIR states on p. 17, last paragraph, "Office above ground-floor activities; printers and other business support services; and Golden Gate University and its related activities are the primary uses occurring southerly of the project site."

Uses on the south side of Mission St. facing the project Assessor's Block are two ground-floor restaurants, several other retail stores, upper-story office uses, a parking garage and a furniture wholesaler.

The third paragraph on p. 17 has been revised to reflect additional developments in the project vicinity (all of the projects listed below are currently included in the cumulative analysis in the EIR). The fourth and fifth sentences of that paragraph now read as follows:

"In addition, several high-rise office buildings are currently under construction or approved near the project site: the 40-story One Sansome St. (Citicorp) building at Sansome and Bush Sts., the 43-story Five Fremont Center at Mission and Fremont Sts., the 18-story Ecker Sq. Building at Jessie and Ecker Sts., the 8- and 23-story buildings of the Central Plaza project at the southeast corner of Market and First Sts., and the 90 New Montgomery proposal at New Montgomery and Mission Sts. A 30-story building, Lincoln Plaza (formerly known as One Anthony Court), is proposed south of the project site at the corner of Anthony and Mission Sts."



## VIII. Summary of Comments and Responses

The warehouse on the site was formerly used as a warehouse for the Robert Morley Company, an office furniture dealer. When the lease expired, the firm decided not to renew for reasons unrelated to the proposed project on the site (John Colver, Vice President, Tishman West Management Corp., telephone conversation, June 1, 1983). The former lease rate is unknown, but was probably low because the firm had occupied the site for some time. No employment separate from the furniture store was associated with the warehouse use; employees of the Morley Company's furniture outlet also operated the warehouse. The building has not been subsequently occupied because of the project anticipated for the site.

Figure 2, p. 8 of the EIR, is a map of current site and vicinity conditions. While the locations of proposed projects in the vicinity are shown, showing outlines of these buildings rather than the buildings now on the lots would not be an accurate description of the current setting.

The One Anthony Place proposal, now known as Lincoln Plaza, is not the subject of this EIR, and pictures solely of the buildings on that site will appear in the EIR being prepared on that project. This EIR includes the Lincoln Plaza design in shadow diagrams and sun path analyses. The shadow diagrams, in particular (pp. 55-67 of the EIR) show the proposed outline and height of the Lincoln Plaza proposal as it was known at the time of publication of the Draft EIR. The design has changed since publication, and is subject to additional change throughout the process of environmental and design review (see Figure 37, Alternative E Site Plan, p. 331, for a rooftop perspective of the Lincoln Plaza design as it is known at the time of preparation of this document). The Lincoln Plaza project was in the analysis of intersections, crosswalk and sidewalk operations included in the project area.

The sponsors of both projects, 71 Stevenson St. and Lincoln Plaza, propose to use the same paving material on their respective plazas (located on the southwesterly side of the 71 Stevenson St. site and the northwesterly side of the Lincoln Plaza project), and to cooperate in the paving of Jessie St. between the project sites with the same material to be used on the

## VIII. Summary of Comments and Responses

project plazas, at the request of the Department of City Planning. The ultimate shape of the plaza area will depend on the designs of the projects if and as finally approved.

The sponsor proposes, subject to approval by City agencies, to include the Muni Substation driveway in the paving to be applied to the project plaza and Jessie St. as part of the project. The proposal is strictly for aesthetic considerations; the paving would not preclude continued use of the driveway as a driveway (no structures or landscaping are proposed) and would not involve transfer of ownership from the City to the sponsor or use of the driveway for a plaza. The City would maintain ownership and use of the driveway.

The following has been added to p. 13 at the end of the fourth paragraph:

"The sponsor proposes, subject to approval by City agencies, to include the Muni Substation driveway east of the project site on Jessie St. in the paving to be applied to the project plaza and Jessie St. as part of the project. No structures or landscaping would be placed on the driveway. The City would maintain ownership and use of the driveway."

### HEIGHTS OF BUILDINGS IN VICINITY

#### Comment

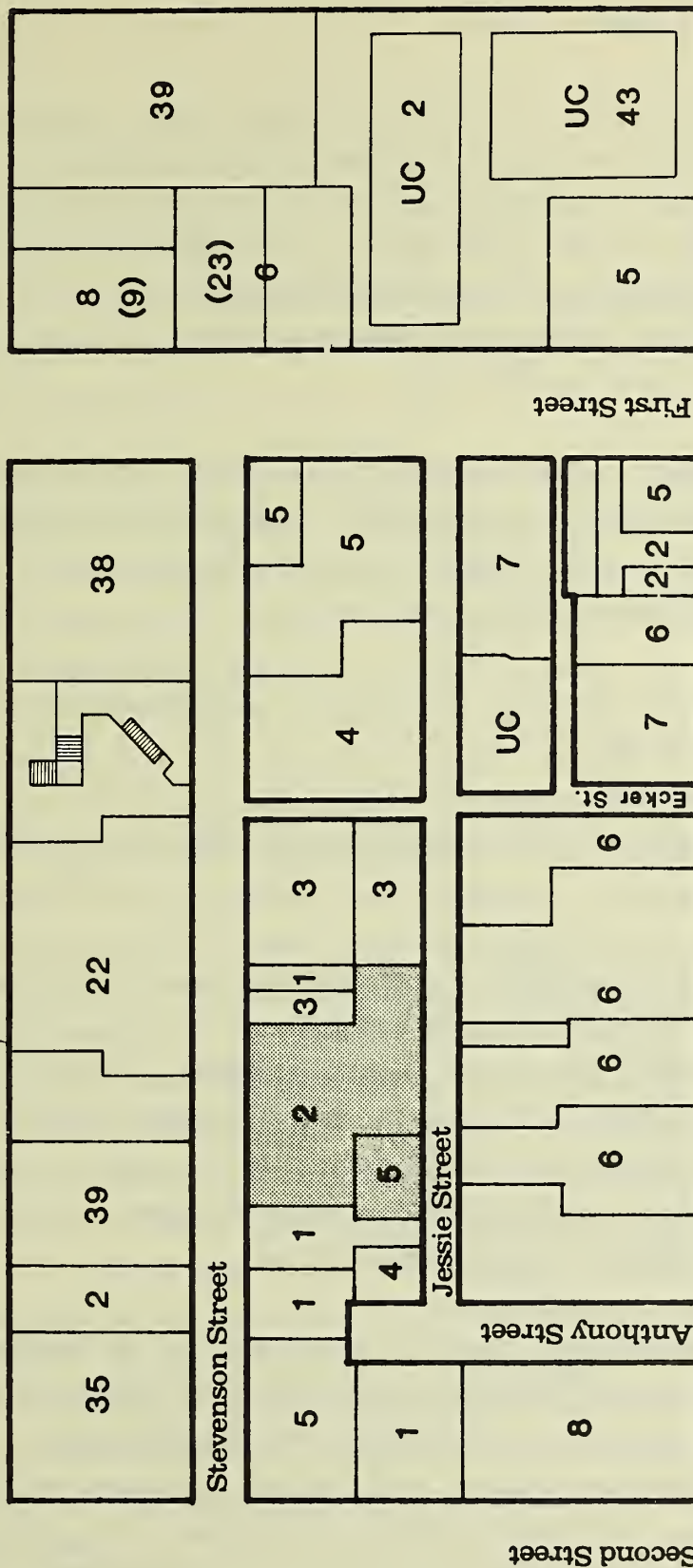
"Page 18, Figure 8 should include some designation of under construction and approved heights, i.e., Central Plaza and [Five] Fremont [Center] and No. 1 Ecker [Ecker Sq.]." (Susan Bierman)

#### Response

Figure 8, p. 18, has been revised to show the number of stories of the Five Fremont Center and Central Plaza developments, as well as the heights of existing buildings on those sites. Figure 8 is included here as p. 208.



Market Street



City and County of San Francisco, Feb., 1982

# LEGEND

Numbers Indicate Building Heights in Stories

Numbers in Parentheses Indicate Proposed Building Heights

UC Under Construction

Project Site

● FIGURE 8: Building Heights Near the Project Site

SOURCE: Environmental Science Associates, Inc.

CUMULATIVE DEVELOPMENT

Comment

"Page 19 - first paragraph - is the space that is to be demolished currently vacant? How did it become vacant? Evictions? Non-renewals of lease at lessors insistence? State the percentage increase in going to 73 million sq. ft., 28% that would be in place by what year?

"Estimate of new development too low. See my list enclosed. Omission of Mission Bay, YBC and Rincon Hill is unwarranted. They are formal projects of the Redevelopment Agency. Especially YBC with a formal process being completed for the central blocks. Add in that space.

"Page [326] - chart with last two years misleading - annualized rate of increase is 3.88 million sq. ft.

"Page [328] - what are the sq. ft. for each building? Also see my chart of projects in the pipeline.

"According to their [Southern Pacific's Mission Bay] released plan, the amount of office space is 18.4 million sq. ft. and 500,000 sq. ft. of retail/light industry, and 7,000 dwellings. Please add that development into your cumulative impact analysis, especially transit, traffic and air quality. My figures on the amount of cumulative development are now 55 million sq. ft. of under construction, approved or proposed commercial development. Please tell what the impacts of that amount of development will be.

"The accelerated pace of development since you decided to do the downtown EIR and decided to embark upon Guiding Downtown Development and decided to have interim controls, flies in the face of everything you stated in your resolution when you took interim, when you took control, you took jurisdiction on having interim controls. And that is the pace of approval has gone up geometrically. You have approved 9.5 million sq. ft. of development in the past 22 months. I expect adding the last one in, you will have approved 12 million sq. ft. by the end of the year. And that is a pace of four times



## VIII. Summary of Comments and Responses

the normal rate. And I want the EIR to explain how you are meeting your own criteria in adopting interim controls to not have a building rush while you are analyzing the impacts of this development." (Sue Hestor)

"Page 20. I still believe we should have some estimate of YBC, even if it is the lowest that they are considering in the EIR, because we have that EIR coming before us soon.

"Is Anthony Place used in the cumulative figure, used for the Muni impact? It is not listed in the appendix. How can you use One Anthony Court to show projects? Shadowing will be less. This project is supposed to have less shadowing than Anthony Place -- but then [the EIR does not] use One Anthony Court as a cumulative impact." (Susan Bierman)

"The [Draft] EIR ... [has] a double standard regarding the accuracy of information necessary to adequately discuss environmental impacts. Only projects under construction, approved or under formal review by the Department are considered in cumulative impact analyses. No projects planned, but not officially approved by other agencies, planned (and assumed) by project sponsors not yet into formal review, or planned by other counties are considered as part of the cumulative impact analyses on housing or transit. It appears that the Department wants to only consider impacts of projects it is 100% certain will be built. However, when considering transit impacts and mitigation, housing, and transportation, the Department only states that Transit Districts have 5-year plans, the ABAG projected plans for housing in 1979, or that there are transportation plans. There is no discussion of what actually is being funded or built, whether there is money to implement these plans or what the current status of these plans are. The Department only wants to acknowledge the possible adverse impacts of 100% certain projects, but feels comfortable with citing plans for mitigation with no indication of whether these plans are real and implementable, or 'just a gleam in a planner's eye.'

"Either the Department should expand its list of cumulative projects whose impacts are analyzed to include 'planned' projects, such as Mission Bay and other agency projects, or the transit, housing and transportation analyses

## VIII. Summary of Comments and Responses

should be based on definitely funded, approved improvements, or expansions, rather than 'planned' development. Until this is done, there is a double standard in the objectivity of the EIR. The Department is only analyzing certain commercial development, but assuming 'planned' but not certain infrastructure expansions to accommodate commercial development.

"CEQA requires that 'probable future' projects be analyzed as part of the cumulative impact analyses. If the EIR for the Residence Element assumes the Mission Bay project is a 'probable future project' whose benefits (i.e., housing) should be considered as probable, then other EIRs such as those for individual projects should use the same definition of 'probable' and analyze the environmental detriments of the project. Since CEQA does not precisely define 'probable future' there is room for interpretation. However, if one DCP EIR assumes the Mission Bay Project is 'probable' other DCP EIRs must do the same. The Comments and Responses statement that the Department chose to define 'probable' differently in the 135 Main EIR does not make it right to do so. Projects assumed to be probable in the Downtown EIR (i.e., those with a 1981 'EE' number) must be considered 'probable' in this EIR. All are CEQA documents in the same city by the same author and the definition of probable should be consistent.

"If these other projects (those in the Residence Element and those with 1981 'EE' numbers) were included in the cumulative impact analyses of the 71 Stevenson St. EIR, the impacts would be much greater.

"The Downtown EIR is analyzing the impacts of five growth scenarios, one of which is growth under existing zoning. This EIR should not be certified until the Downtown EIR process is complete because its certification would constitute approval to proceed with one of the five Downtown EIR alternatives before the EIR analyzing the impacts is complete. Further, this EIR and other similar EIRs document incredible adverse impacts of cumulative development - many of which are not mitigated. The major mitigation measures being studied in the Downtown EIR are annual growth limits of .5, 1.0 and 1.5 million sq. ft. Since the impacts are directly related to the amount of sq. ft. developed, those impacts may be reduced greatly by adopting one of the mitigation limits. You are prejudicing the ability of the City to minimize



## VIII. Summary of Comments and Responses

environmental disaster by approving these projects and undercutting the ability to impose via an annual limit some rational ability for the City to match available resources with the demands placed on them by additional office development." (David Jones)

### Response

The demolished space referred to in the comment is the space that would be or has been demolished to make way for new developments (in the cumulative analysis). This space has been subtracted from the total amount of development under construction, approved or proposed to arrive at the amount of net new space which would result, and the resulting incremental impacts. The reasons for vacancies in the space demolished or proposed for demolition vary from development to development. Businesses can go out of business for any number of reasons, lose their lease as the result of a demolition clause or other reason, or change quarters in response to changes in size or location needs. Businesses displaced from one site in San Francisco often move to another building in the City and within the downtown. It is beyond the scope of this EIR to determine the reason for vacancies not related to the project.

As noted earlier, one of the buildings on the project site was vacant when it was acquired and this is discussed on p. 203 in the response under the heading "Uses in Project Area."

Table A-1, p. 141 of the Draft EIR, has been replaced with the List included here on p. 213. This list includes developments constructed through 1982. The list in the EIR was current through 1981. Based on this list, the annualized rate of construction over three years is 2.7 million gross sq. ft.

The first and last sentences of the first full paragraph on p. 19 are revised to reflect the new list as follows:

"Existing office space in San Francisco totals about 60.6 million gross sq. ft. (see Appendix A, Table A-1, p. 397)." "If these

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## APPENDIX A - LAND USE AND CUMULATIVE DOWNTOWN OFFICE DEVELOPMENT

TABLE A-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1982, IN GROSS SQUARE FEET

<u>Year</u>	<u>Total Gross Sq. Ft. Completed</u>	<u>5-Year Total</u>	<u>5-Year Annual Average</u>	<u>Cumulative Total of All Office Buildings</u>	<u>Cumulative Total of All Downtown Office Buildings</u>
Pre-1960		(Net)(a)	(Net)(a)	28,145,000(b)	24,175,000(c)
1960	1,183,000				
1961	270,000				
1962	--				
1963	--				
1964	1,413,000				
		2,866,000	573,200		
1960-1964		(2,580,000)	(516,000)	30,725,000	26,754,000
1965	1,463,000				
1966	973,000				
1967	1,453,000				
1968	1,234,000				
1969	3,256,000				
		8,379,000	1,675,800		
1965-1969		(7,541,000)	(1,508,000)	38,266,000	34,295,000
1970	1,853,000				
1971	--				
1972	1,961,000				
1973	2,736,000				
1974	2,065,000				
		8,615,000	1,723,000		
1970-1974		(7,753,000)	(1,550,000)	46,019,000	42,048,000
1975	536,000				
1976	2,429,000				
1977	2,660,000				
1978	--				
1979	2,532,000				
		8,157,000	1,631,400		
1975-1979		(7,341,000)	(1,468,000)	53,360,000	49,389,000
1980	1,284,000				
1981	3,029,000				
1982	3,771,000				
		8,084,000(d)	2,694,700(d)		
1980-82		(7,275,600)(d)	(2,242,200)(d)	60,635,600	56,559,600



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TABLE A-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1982,  
IN GROSS SQUARE FEET (Continued)

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- (a) Net equals 90% of gross. Net new space is added at an increase factor of 90%, since it is assumed that space equal to 10% of a new building is demolished to make land available for the new replacement building.
- (b) Source: San Francisco Downtown Zoning Study, Working Paper No. 1, January 1966, Appendix Table 1, Part 1. For pre-1965, data include the area bounded by Vallejo, Franklin, Central Skyway, Bryant and Embarcadero. Also includes one-third of retail-office mixed use. For post-1964, data include the entire city.
- (c) Gross Floor Space for downtown offices are included for the following functional areas: Financial, Retail, Hotel, Jackson Square, Golden Gateway, Civic Center, South of Market, and Outer Market Street as defined in the cited January 1966 report. For post-1964, the entire area east of Franklin Street is included.
- (d) Three-year total and average.

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SOURCE: Department of City Planning, March 15, 1983.

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projects were all completed, San Francisco would have a total of approximately 77 million sq. ft. of office space."

The figure "57.2 million" in the second line of the last paragraph on p. 30 is changed to "60.6 million".

The two lists of cumulative development submitted by Sue Hestor are on file at the Department of City Planning, Office of Environmental Review, 450 McAllister St., 5th Floor. All projects included on the lists have been checked against the Department's cumulative list. Explanations for inclusion or non-inclusion of projects from the commentor's lists are provided below.

Of the developments requested in the comment to be included in the cumulative analysis, many are already on the list; some are too preliminary for inclusion; some are included as part of the base case and many are not appropriate to include in a cumulative analysis of downtown projects.

## VIII. Summary of Comments and Responses

The list submitted by the commentator include developments such as the following which are already included on the list of developments used for cumulative analysis: 1091 10th St., 195 Berry (also called China Basin Building), Welsh Commons, Golden Gateway III and 690 Second at Townsend. The 395 Hayes project is included as "350 Gough", and the Gift Mart is included as "Convention Plaza".

An application has not been filed for the Hills Brothers Building. While an application for the Trinity Plaza project was received by the Department of City Planning on May 11, 1983, it is subject to revision once staff review is more fully underway and is too preliminary for inclusion in cumulative analysis.

Several developments requested to be added were approved a few years ago and have since been completed: Holiday Inn Fisherman's Wharf, 1625 Van Ness and 483 Third St. They are part of the base case and would be double-counted if included in the cumulative analyses.

The cumulative development analysis has considered 0.5 million net gross sq. ft. of retail space proposed to be built in conjunction with office buildings as shown in Table A-3 on p. 402. The analysis did not consider any free-standing retail space such as Neiman-Marcus, which is the only under-construction, approved, or under-review free-standing retail space in the study area (for a discussion of the effects of inclusion of this retail space in the analysis of cumulative development, see p. 165, first paragraph, of this response).

The following proposals are hotel, residential or other uses: Olympic Club (Post/Mason) Hotel, 790 Van Ness, Monarch Hotel, Alcazar Theatre, Franklin and McAllister, Grosvenor Townhouse, Stockton/O'Farrell, Hilton Tower No. 2, Holiday Inn, Holiday Inn-Civic Center, Hotel Ramada and Meridien Hotel. These developments have not been included in the list because they have different employment, fiscal, service and transportation effects than does office development. See also Appendix D, pp. 343-44 for a discussion of types of projects that are not included in the cumulative analysis.



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Projects proposed at 650 Seventh, 870 Brannan, 15th and Vermont and 101 Utah (Wholesale Mart addition) are all non-office uses, such as wholesale showrooms, which have fewer employees per sq. ft. and different transportation effects than office uses. Therefore, they do not have a statistically significant contribution to cumulative effects.

The following proposals appear to be inactive and therefore have not been included: Fox Plaza addition, 301 Mission and 99 Oak. Four others, 275 Steuart, 199 New Montgomery, 477 Pacific and the Warfield Hotel no longer have building permit applications pending as sponsors withdrew the applications (that for 275 Steuart was withdrawn nearly two years ago). The 963 Pacific application was disapproved. The original 5th and Market proposal was withdrawn. A new proposal for that site has been announced in the newspaper, but as specifics are unknown, including development at that location in the cumulative analysis would be premature.

Negotiations are underway between the General Services Administration and the San Francisco Redevelopment Agency for a site for a federal office building in Yerba Buena Center. If a building program were authorized by Congress in Fiscal 1983, plans would be developed. Construction would be completed and occupancy would follow in the early 1990's. Funds for construction of a State building in San Francisco were requested but not included in the State budget for Fiscal 1982-83. Construction and occupancy dates are unknown.

The cumulative list does contain those office buildings in the Yerba Buena Center Redevelopment Area which are under construction or for which LDAs have been approved and which have definitely identified floor area figures. The projects included are the Office Building, SB-1, Block 3752, 11,000 sq. ft.; Yerba Buena West, Block 3724, 335,000 sq. ft.; and Convention Plaza, Block 3735, 339,000 sq. ft.

Actions by the City Planning Commission approving Redevelopment Area Plans constitute approval of a general plan with a range of permitted uses and floor areas but without precise floor area figures for each parcel. These are determined by the Redevelopment Agency in negotiations with accepted

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developers. Negotiations are currently under way with a developer for the central blocks of Yerba Buena Center. Unless and until the negotiations are completed and an LDA is approved, there are no defined floor area figures, by type of use, for those blocks that would be comparable with those included in the list used in the cumulative analysis.

Although a maximum limit on development has been established in each redevelopment area, there is not enough information about proposals which have not obtained an LDA to provide reasonably accurate calculations of cumulative impacts comparable to those based on the cumulative project list. If the maximum amount of office space permitted by the YBC plan were included, however, the cumulative total for projects under review would be increased by 1.9 million sq. ft., or 11%. It should be noted that the maximum floor area permitted in a redevelopment area by an approved Redevelopment Plan, like the maximum floor area allowed in a zoning district by a zoning ordinance, is seldom, if ever, attained. It would be unreasonable to suggest that all the potential floor area permitted by commercial zoning districts in San Francisco be counted in the cumulative list for analysis in a single-project EIR.

The Yerba Buena Center Redevelopment Area (YBC) has been the subject of environmental review since 1973. In 1978 an EIR was certified covering four distinct development alternatives with variants and one tentative proposal for the 86-acre YBC area. In 1981, a Supplement to the 1978 EIR, pertaining to a development program for the block fronting on Market St., which program had not been covered specifically in the 1978 FEIR, was certified. In January 1983, a Second Draft Supplement (82.35E) to the EIR, which presents an additional development alternative for the entire YBC area and four one-block variants, was certified. Only one project within this alternative has been granted an LDA, and it is residential (Erwin Tanjuaquio, Redevelopment Agency, telephone conversation, April 27, 1983).

As noted, those parcels within YBC that have buildings under construction or approved LDAs are already included in the transportation and other



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cumulative analyses in the EIR. The disposition of all other vacant parcels and lots on which buildings are located that are not slated for preservation is under the control of the Redevelopment Agency Commission. The Agency Commission could elect to approve any of the uses that have received environmental review in the 1978 FEIR and its two Supplements, or which may receive environmental review in the future. To state precisely particular uses and amounts of floor areas for YBC parcels for which specific plans have not been approved would give a false impression of knowledge or accuracy and could be misleading.

A Rincon Hill Plan is being prepared by the Department of City Planning and is currently under staff review. Separate from the Rincon Point/South Beach Area Plan under the San Francisco Redevelopment Agency, the Rincon Hill Plan establishes a set of general guidelines for future private development that may be proposed in the subarea. While the plan describes development intensity that is considered to be appropriate for the area, there are at present no development proposals. The Rincon Hill Plan, if adopted, would result in zoning changes that would establish new development limits. Unlike Rincon Point/South Beach, the City has no control of property in the Rincon Hill subarea. To predict or project how much of the total potential might be proposed for development by unknown developers operating under a plan that as yet is not adopted would not be appropriate for inclusion in the cumulative analysis of downtown development, of which more specific details and probability of construction are known.

The cumulative study area selected was based partially upon the transportation facilities serving downtown and partially upon topographic constraints. Developments within the cumulative study area were assumed to add travel in the peak direction (heaviest demand direction) on the downtown street and transit system. Developments outside this area (including the Bayshore Freeway corridor in San Mateo County) would not have a similar effect. The following projects are not located in the greater downtown area which is the basis for the cumulative analysis: San Francisco Executive Park, Mission & Russia, 350 Beach, 1734 Union, 1969 Union, 2318 Fillmore, 1975 Market, Francisco Place, 385 Ivy, 1660

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### Mission and 1099 Sixteenth St.

The Cumulative Office and Retail Development list, Table A-2, p. 399, if updated to June 1, 1983, would include the following additional projects (areas shown are gross office only; the analysis is based on the net increase in office and retail areas of cumulative development): AB 177, 1066 Grant, 6,200 sq. ft. retail; AB 3717, 123 Mission, 342,800 sq. ft.; AB 3750, 600 Second, 228,000 sq. ft.; AB 3735, Planter's Hotel conversion, 20,000 sq. ft.; AB 738, One Flynn Center, 25,000 sq. ft.; AB 672, Wealth Investments, 104,500 sq. ft.; AB 3750, 642 Harrison, 54,400 sq. ft.; AB 3794, 155 Townsend, 19,000 sq. ft.; AB 143, 1000 Montgomery, 39,000 sq. ft.; AB 141, 100 Broadway, 13,000 sq. ft.; AB 176, 900 Kearny, 25,000 sq. ft.; AB 110, Embarcadero Terraces, 139,000 sq. ft.; AB 3763, 400 2nd, 71,500 sq. ft.; AB 3788, 640 2nd St., 39,100 sq. ft.; AB 258, Pine/Kearny, 325,400 sq. ft.; AB 3708, Lincoln Plaza, 540,000 sq. ft.; AB 227, 505 Montgomery, 354,290 sq. ft.; AB 762, Opera Plaza, 50,000 sq. ft.; AB 65, 990 Columbus, 12,000 sq. ft.; AB 146, 644 Broadway, 42,800 sq. ft.; AB 225, 814 Stockton, 3,500 sq. ft.; AB 641, 1735 Franklin, 8,700 sq. ft.; AB 647, 1581 Bush, 16,000 sq. ft.; AB 3524, 44 Gough, 30,000 sq. ft.; AB 832, 211 Gough, 7,100 sq. ft.; AB 837, 110 Gough, 13,000 sq. ft.; AB 647, 1670 Pine; 8,500 sq. ft.; AB 113, 1171 Sansome St., 30,000 sq. ft.; AB 331, Mixed Use Development, 218,600 sq. ft.; AB 814, 101 Hayes, 126,000 sq. ft.; AB 816, 300-350 Gough, 16,000 sq. ft.; and AB 834, 25 Van Ness, 143,600 sq. ft.

In updating the list, the following deletions and revisions would also have to be made: the 1049 Market (108,000 sq. ft.), National Maritime Union (80,000 sq. ft.) and Greyhound Bus Terminal (100,000 sq. ft.) proposals would be removed. These have been withdrawn from consideration by their sponsors. In addition, the square footage analyzed for the Ferry Building in the list used in the Draft EIR was high and should be reduced by 173,000 sq. ft. of office space and 15,000 sq. ft. of retail space. Some reorganization of the list would be necessary too, since several projects have changed category from the time of publication of the Draft EIR (i.e., from under formal review to approved to under construction).



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Most of these revisions have occurred since the DEIR was printed. If the totals were adjusted to reflect the June 1 list, net new office square footage would increase by about 2.4 million and net new retail square footage would increase by 0.15 million sq. ft. This addition would be within the +10-15% margin of error of the accuracy of the analysis methodology in the EIR. No 100% certainty exists that any of the developments on the list (as updated) would be built, but development parameters are reasonably defined and sponsors' intentions to pursue the projects are demonstrated.

The floor areas, both net and gross, of the developments considered in the cumulative analysis presented in Appendix A, Table A-2, p. 399, are listed in Table A, p. 222 in this chapter.

The City does not currently have a project approval policy related to the rate of development in the City. The City Planning Commission has reviewed proposals for development limits and a development moratorium. No policy has been established with respect to these scenarios in the absence of a completed Downtown EIR. The purpose of the EIR is to present decision makers with information about the physical environmental impacts of the project and appropriate cumulative development. The EIR evaluates the relationship of the project to existing City policies; the broad policy question raised in the comment is beyond the scope of an EIR on a single project.

Due to the project block's proximity to the Chevron and Tishman public plazas, the EIR included the project proposed at One Anthony Court (now called Lincoln Plaza) at Anthony and Mission Sts. in its cumulative shadow analysis, though its building design and scale was not firmly established. Similarly, the Lincoln Plaza project was included in the pedestrian impacts analysis in the EIR due to the particular pedestrian nature of the immediate project area with its network of narrow streets and alleys.

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However, because of its preliminary status, the Lincoln Plaza proposal did not meet the criteria for being included in the Department's cumulative projects list contained in Appendix A, p. 397. Since the EIR was published, the Lincoln Plaza project has been completely redesigned (see Alternative E, p. 329 for new shadow diagrams). As noted earlier in this response, the inclusion of Lincoln Plaza's proposed area in the downtown-wide analysis of cumulative impacts would be within the ±10-15% margin of error of the analysis methodology.

The analysis of cumulative impacts in the EIR does not include specific developments in other counties, regardless of their status. Development levels in other counties, where they are introduced, are provided as an informational item in the discussion of the office market. Rough projections of housing demand and supply for the region are presented in the appendix, also as an informational item.

Current EIRs on specific development proposals evaluate impacts for the year when full occupancy can be expected, no later than 1990. Within this context, cumulative analysis considers other similarly defined proposals that may be reasonably assumed to be operating within this time frame.

"Plan" EIRs (such as YBC and Rincon Point/South Beach), in outlining a range of possible development scenarios and a time frame that is substantially longer than those for specific development proposals (15 to 20 years or more), are less defined and therefore more tenuous as to their "probable" outcome. When LDAs are issued for actual building proposals, these buildings may enter a time line for full development more similar to that for the projects under formal review in the Department of City Planning's cumulative development list and would therefore be more appropriate for including in the cumulative impact analysis.

The Residence Element is a long-term policy statement at a generalized level of detail. Though subject to many unknown economic and other variables, it provides a long-range overall projection consisting of a variety of possible independent actions that may or may not all be



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TABLE A: DOWNTOWN OFFICE PROJECTS CONSIDERED IN THE CUMULATIVE ANALYSES, WITH FLOOR AREAS (as of August 6, 1982)

<u>Downtown Office Projects Under Formal Review</u>						
Block	Case No.	Project Name	<u>Office</u> (Gross Sq. Ft.)		<u>Retail</u> (Gross Sq. Ft.)	
			New Construction Total	Net New	New Construction Total	Net New
58	82.234ED	Roundhouse	45,000	45,000	0	0
112	81.258	Ice House Conversion (C)	209,000	209,000	0	0
136	81.245	955 Front at Green	50,000	50,000	0	0
176	81.673EACV	Columbus/Pacific Savoy	49,000	49,000	22,000	22,000
228	81.610ED	569 Sacramento (C)	19,000	19,000	0	0
240	81.705ED	580 California/Kearny	329,500	260,000	6,500	6,500
265	81.195ED	388 Market at Pine	234,500	80,500	10,000	-8,500
269	81.132ED	Russ Tower Addition	405,900	405,900	0	0
270	81.175ED	466 Bush	86,700	86,700	7,800	2,200
288	81.461ED	333 Bush (Campeau)	498,400	458,100	20,900	20,900
288	81.687ED	222 Kearny/Sutter	269,400	202,400	10,000	-8,400
669	81.667ED	1361 Bush (C)	45,720	45,720	0	0
716	81.581ED	Polk/O'Farrell	61,600	61,600	22,400	22,400
3702	81.549ED	1145 Market	137,000	65,000	8,000	8,000
3703	81.494ED	1041-49 Market	108,800	108,800	43,000	30,100
3707	81.492ED	90 New Montgomery	124,300	124,300	3,350	3,350
3707	81.245C	New Montgomery Pl.	238,200	222,100	0	-6,100
3708	81.493ED	71 Stevenson	324,600	324,600	6,200	6,200
3733	82.29E	832 Folsom	50,000	50,000	0	0
3760	81.386	401 6th	7,000	7,000	0	0
3776	81.59	Welsh Commons	55,600	55,600	12,000	12,000
3778	81.630ED	548 5th/Brannan	250,000	250,000	0	0
3781	82.99E	Greyhound Bus Terminal	100,000	100,000	0	0
3786	82.33E	655 5th/Townsend	126,250	126,250	0	0
3789	82.31EV	615 2nd/Brannan (C)	106,000	106,000	0	0
9900	81.63	Ferry Building Rehab	115,000	115,000	110,000	110,000
		-Pier One Development	127,000	127,000	15,000	15,000
		-Agriculture Building	27,000	27,000	14,000	14,000
TOTAL			4,200,470	3,781,570	311,150	249,650

## Approved Downtown Office Projects

106	81.415ED	1299 Sansome	41,000	41,000	3,500	3,500
161	80.191	Mirawa Center	36,000	36,000	30,650	30,650
164	81.631D	847 Sansome	23,750	23,750	0	0
164	81.573D	50 Osgood Place	22,500	22,500	9,100	9,100
166	CU81.7	222 Pacific at Front(C)	142,000	142,000	0	0

## VIII. Summary of Comments and Responses

TABLE A: (continued - page 2)

Approved Downtown Office Projects (continued)

Block	Case No.	Project Name	Office (Gross Sq. Ft.)		Retail (Gross Sq. Ft.)	
			New Construction Total	Net New	New Construction Total	Net New
166	80.15	750 Battery	105,400	105,400	12,800	12,800
206	81.165D	401 Washington/Battery	13,200	13,200	1,800	1,800
227	80.296	Bank of Canton	230,500	177,500	0	-800
261	81.249ECQ	333 California	640,000	466,500	15,500	15,500
262	81.206D	130 Battery	41,000	41,000	0	0
267	81.241D	160 Sansome	2,200	2,200	0	0
268	81.422D	250 Montgomery at Pine	105,700	65,700	8,000	8,000
271	81.517	453 Grant	27,500	27,500	6,200	6,200
271		582 Bush	18,900	18,900	0	0
294	82.870	44 Campton Place	7,600	7,600	0	0
311	82.120D	S.F. Federal	246,800	218,850	1,600	-9,440
351	DR79.24	Mardikian/1170-72 Market	40,000	40,000	0	0
3512	82.14	Van Ness Plaza	170,000	170,000	6,000	6,000
3518	81.483V	291 10th St.	25,700	25,700	0	-25,700
3705	80.315	Pacific III Apparel Mart	332,400	332,400	0	0
3709	81.113ED	Central Plaza	353,100	136,300	17,400	17,400
3715	82.16EC	121 Steuart	33,200	33,200	0	0
3717	80.349	Spear/Main (160 Spear)	279,000	279,000	7,600	7,600
3717	82.82D	135 Main	260,000	260,000	4,000	4,000
3722	81.548DE	466 Clementina (C)	15,150	15,150	0	0
3722	81.417ED	144 Second at Minna	30,000	30,000	0	0
3724	81.102E	Holland Ct. (C)	27,850	27,850	0	0
3729	82.860	774 Tehama	5,800	5,800	0	0
3733	81.2	868 Folsom	65,000	65,000	0	0
3735	80.106	95 Hawthorne (C)	61,900	61,900	0	0
3738	DR85	315 Howard	294,000	294,000	3,200	3,200
3741	82.203C	201 Spear	229,000	229,000	5,200	5,200
3749	81.18	Marathon - 2nd & Folsom	681,700	681,700	39,300	39,300
3751	77-220	National Maritime Union	80,000	80,000	0	0
3752	77-220	Office Bldg. (YBC SB-1)	11,000	11,000	0	0
3763	81.287V	490 2nd at Bryant (C)	40,000	40,000	0	0
3763	81.381	480 2nd at Stillman (C)	35,000	35,000	0	0
3775	81.147V	338-340 Brannan (C)	36,000	36,000	0	0
3776	81.693EV	539 Bryant/Zoe	63,000	63,000	0	0
3788	81.296Z	690 2nd/Townsend (C)	16,600	16,600	16,000	16,000
3787	81.306	252 Townsend at Lusk	81,900	81,900	0	0
3789	81.552EV	625 2nd/Townsend (C)	157,000	157,000	0	0
3794	81.569EV	123 Townsend	104,000	49,500	0	0
3803	81.244D	China Basin Expansion	196,000	196,000	0	0
TOTAL			5,428,350	4,862,600	187,850	150,310



## VIII. Summary of Comments and Responses

TABLE A: (continued - page 3)

Downtown Office Projects Under Construction						
Block	Case No.	Project Name	Office (Gross Sq. Ft.)		Retail (Gross Sq. Ft.)	
			New Construction Total	Net New	New Construction Total	Net New
163	81.1	901 Montgomery	63,000	63,000	18,800	18,800
164	81.251D	936 Montgomery-(disco)	21,500	11,500	0	0
167		Golden Gateway III	103,000	103,000	0	0
196		736 Montgomery	40,000	40,000	0	0
196	CU79.49	Pacific Lumber Co.	92,000	92,000	0	0
208	81.104EDC	Washington/Montgomery	235,000	233,300	4,000	-1,200
237	DR80.6	353 Sacramento (Daon)	277,000	251,000	8,300	-2,000
239	DR80.1	456 Montgomery	160,550	160,550	24,250	24,250
240	DR80.16	550 Kearny	71,400	71,400	0	0
263	CU79.12	101 California	1,265,000	1,257,000	24,700	-14,300
287	81.550D	Sloane Building (C)	125,300	125,300	30,000	30,000
288	DR80.24	101 Montgomery	264,000	234,000	5,900	-14,100
289	81.308D	One Sansome	603,000	603,000	7,000	7,000
292	DR79.13	Crocker National Bank	676,000	495,000	86,000	54,000
312	79.370	50 Grant	90,000	90,000	0	0
351	79.133	U.N. Plaza	92,050	92,050	0	0
762		Opera Plaza	50,000	50,000	0	0
3702	81.25	1155 Market/8th	138,700	138,700	8,800	8,800
3708	80.34	25 Jessie/Ecker Square	111,000	111,000	0	0
3709	80.36	Five Fremont Center	791,200	722,200	35,000	17,300
3712	79.11	Federal Reserve Bank	640,000	640,000	0	0
3715		141 Steuart	80,000	80,000	0	0
3717	79.236	101 Mission at Spear	219,350	219,350	0	0
3717		150 Spear	330,000	330,000	0	0
3718	79.12	Pacific Gateway	540,000	540,000	7,500	7,500
3724		Yerba Buena West	335,000	335,000	0	0
3735		Convention Plaza	339,000	339,000	0	0
TOTAL			7,753,050	7,427,350	260,250	136,050
GRAND TOTAL			17,381,870	16,071,520	763,750	536,010

SOURCE: Department of City Planning, August 6, 1982

implemented. Without any details of the action or clear demonstration of proceeding through the City review process, their inclusion in the cumulative analysis would introduce a speculative bias.

## VIII. Summary of Comments and Responses

While one of the developments referenced in the Residence Element is the Mission Bay project, an actual plan for development has not been firmly established; several alternatives are under consideration by the sponsor's planning team. To date, no formal applications for project approval have been received by the City. While Mission Bay has been widely publicized, its ill-defined status makes it too speculative to include in the cumulative analysis for this EIR. Due to an extraordinarily large site area, and the intensity of development contemplated, any eventual submittal of a Mission Bay proposal in itself, would be similar to that of a long-range plan that would likely be implemented in phases.

Transit Agencies' Five-Year Plans are updated on an annual basis and, as such, represent the Agencies' current best projections for service levels. They also represent the best public available information. This EIR projects load factors both with and without the capacity increases contained in the Five-Year Plans for each transit agency. For further discussion of the use of Five-Year Plans in the EIR transportation analysis, see the response on p. 275, under the heading "Cumulative Transit Impacts - Load Factors and Projected Capacities".

The EIR on the specific 71 Stevenson St. project does not, and need not, evaluate overall downtown planning possibilities, such as will be evaluated in the Downtown EIR. On July 22, 1982, the Superior Court determined that "nothing in the California Environmental Quality Act, the State Guidelines, the Government Code, the San Francisco City Charter, the San Francisco Administrative Code, or the case law supports [the] position that the pendency of a program EIR such as the Downtown EIR herein disables [the Commissioners] from acting upon and/or approving and certifying project EIRs pending completion of the program EIR or from approving such projects."

The alternatives chapter of this EIR discusses project alternatives which relate to existing City policies. It is inappropriate to draw comparisons between existing policies and speculative future policies which may be altered or amended several times before they are proposed for approval.



## VIII. Summary of Comments and Responses

### C. ARCHITECTURAL RESOURCES AND URBAN DESIGN

#### ARCHITECTURAL RESOURCES

##### Comment

"Page 22 - how many buildings are rated at all in terms of percentage?

"Page 25 - transition in use as well as visual transition. Please add.

"Page 26 - note concentration of rated buildings - extremely high, also note that nothing on Market St. is rated, except building slated for demolition at First St., and buildings slated for [One New Montgomery Place] project demolition. The architectural character and importance of the area belongs to the area south of [Stevenson St.]." (Sue Hestor)

##### Response

Between 1974 and 1976, the San Francisco Department of City Planning conducted a citywide inventory of architecturally significant buildings and gave ratings to 10,000 buildings. The original 1970 Heritage survey included 790 parcels; 551 buildings received ratings of C or higher. The 1982 Heritage survey of the entire C-3 area included about 1500 parcels; of those parcels containing buildings, 945 received ratings of C or higher.

A transition in appearance need not accompany a transition in use. A description of the land use transition in the area from the site to the area north of it is found on p. 17, paragraphs 3 and 4.

The EIR presents ratings of buildings on and adjacent to the project block. Thus, it acknowledges that the buildings fronting the south side of Market St. on the project block are not rated. The EIR states, on p. 47, "Since the 'C' rating is primarily a reference to the setting created by buildings, the importance of the 'C' rating for other remaining nearby older structures could be lessened."

URBAN DESIGN

Comment

"[N]ote that recent projects approved by the Commission have shifted the scale of buildings south of Market from mixture of low-rise, human-scaled, small buildings to multiparcel block-busters with pretty much straight-up walls, at least for 10-15 stories, squeezing out small properties, small retail establishments, small office spaces at lower rents. ... This is a major change in scale of the area and in use.

"[T]he only reason this project may be compatible is because of other recently approved projects. It certainly doesn't fit in with other older, more traditional low-intensity uses south of Market." (Sue Hestor)

"I think this EIR, so far, by p. 18, doesn't give a picture of the distinctive nature of the area, tries to show buildings covering the whole lot area, and -- Oh, it tries to show that buildings covering whole lot area may detract from the area, and plazas add to the area, which may or may not be so. But the buildings in the block now give great, have great distinction, though perhaps they are taken for granted. I am including Mission St. in that." (Susan Bierman)

Response

The EIR discusses, on pp. 25-30, the difference in scale of development represented by the site area as opposed to highrise development north of the site. On p. 47, the EIR states that, "the setting would be changed from one of low-rise converted warehouse type buildings to a mixture of these older buildings with the new high-rise office buildings." On p. 32, the EIR compares rents in older south-of-Market office buildings (\$12-\$15 per sq. ft.) to those in more recently constructed south-of-Market buildings (\$23).



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The following is added as the third and following sentences of the fourth full paragraph on p. 25:

"This strong building edge [North of Market Financial District], established during the building boom of the early 1970's, is being altered by highrise construction south of Market St. Existing highrise buildings east of Second St. (Ecker Sq., Five Fremont) have created a precedent for highrise construction in this area. Proposals for buildings near the project site, such as Lincoln Plaza, 90 New Montgomery, and One New Montgomery Place would contribute to the southward shift of the Financial District's boundary."

The following is added as the last sentence on p. 25a:

"Ecker St. in the project block is closed to through traffic. The restaurant, bookstore, banners, plaza and small-scale brick buildings on Ecker St. and on Stevenson St. near Ecker contribute to a sense of pedestrian activity and scale in this area."

The EIR states, on p. 48, Item 4B, "The project would represent a departure in form and scale from neighboring older development."

The discussion on p. 25 concerning design common to many recent office buildings (that they are not built to lot lines, being set back with plazas) is not intended to imply that such design is more desirable than that common to older structures which are built to lot lines. The discussion is merely descriptive and comparative and presents no value judgments.

On p. 30, first paragraph, the EIR states, "Overall, the area reflects visual diversity and architectural complexity in its combination of large- and small-scale structures, contrasting building materials and variations in streetscape settings."

## VIII. Summary of Comments and Responses

### RELATIONSHIP OF THE PROJECT TO THE URBAN DESIGN ELEMENT OF THE COMPREHENSIVE PLAN

#### Comment

"Page 47 - only selected policies, not all relevant policies of the urban design plan - please analyze all possibly relevant policies, not merely those that the developer wants to consider.

"Page 48 - A2 - that is a misinterpretation. There already is a contextual setting on those midblock alleys. It is low rise support service enterprises. That district already has a character. You are ruining the context. It is not the context of the north of Market area.

"Page 49 - no. 7 - need to discuss scale of interior blocks.

"Page 50 - no. 8 - prevailing scale of development is low and very human on the interior blocks. This is wrong here.

"Page 50 - no. 9 - the current low scale off Market Street already provides a humane, pedestrian context. This building would ruin it." (Sue Hestor)

"Page 48, Policy A 2. Same policy could also apply to the two C-rated buildings and B- and C-rated buildings on Mission St. as well as subject block rated buildings. It seems a misuse of policy. At the very least, the reverse should be stated." (Susan Bierman)

#### Response

The policies discussed in Table 3 were determined to be applicable in the best judgment of the EIR authors after review of the Urban Design Element of the Comprehensive Plan. Without specific policy references in the comment, it is not possible to evaluate their applicability.

The following replaces the discussion on p. 48, No. 2:



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"The project would represent an extension of high-rise development into an area of small-scale warehouse and commercial buildings, as do the Ecker Sq. building nearing completion, and the proposed 49 Stevenson St. and Lincoln Plaza proposals."

The EIR states, on p. 49, No. 7, that the project would be taller than neighboring development.

The following sentence has been added to p. 50, No. 8:

"The horizontal dimensions of the project would exceed those of most older buildings in the interior and on the southern portions of the block."

The following sentence has been added to p. 50, No. 9:

"The project, while contributing to change in the scale of both Stevenson and Jessie Sts., would add to the visual interest at street level by creating retail uses, and a pedestrian arcade."

### PROJECT VISIBILITY

#### Comment

"Page 51 - outrageous explanation of Market St. The project, by intruding a highrise into the sky visible from Market between the Standard Oil buildings, would dominate what is now an expanse of blue and fill in the last chink in the block. The first paragraph is totally wrong about that effect. It would wall off Market St. Sky is valuable." (Sue Hestor)

#### Response

The word "north" has been deleted from the first sentence on p. 51. The sentence now reads:

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"Generally, the project would not be highly visible in short-range views from the west and east because of its location behind taller development on the northern section of the project block."

The following sentence has been added as the second and third sentences of the first paragraph on p. 51:

"The project would be visible in short range views from Sansome St. It would fill in the existing open vista between the two Chevron Towers (see Figure 16, p. 52)."

The last sentence of the first paragraph on p. 51 has been deleted.

See the discussion of Alternative E, Design Alternative, on p. 329. This, the applicant's preferred alternative, has been designed with the intention of preserving a greater portion of the vista from Sansome St.

### SHADOWS AND SUN PATH ANALYSIS

#### Comment

"Page 55 - how far would shadow go on north side of Market?" (Sue Hestor)

"Page 55 on. None of the shadow diagrams show where plazas are located. They are not marked. And they should have the names of all of them clearly shown." (Susan Bierman)

"Page 68, 69, 70 and 71. I didn't understand also: If the time is daylight saving time, why use the solar time? Why not just show whatever time is normally used? It is confusing." (Susan Bierman)



## VIII. Summary of Comments and Responses

### Response

Shadows from the project described in the EIR would extend north across Market St. in December from mid-morning to about 10:30 a.m. If unobstructed, the shadow would be about 830 ft. long at this time and would extend past the first two rows of blocks north of Market St. facing the project block. However, the actual shadow length would be shorter because of tall structures in the shadow path, including the 40-story One Sansome (Citicorp) building under construction and the 22-story Standard Oil building on the southwest corner of Bush and Sansome Sts. adjacent to the One Sansome site. The shadow would fall on the lower portion (former banking temple) of the One Sansome building, which will contain a public entry court with seating area designed with a glass roof to allow sunlight to filter through. The entry court was one of several features of the building for which floor area bonuses were awarded. In December at noon, the project shadows would reach the southern corner of the Crown Zellerbach building. The Crown Zellerbach Plaza would not be shaded by the project at that time. In March in mid-morning, the project shadow would reach the north side of Market St.

The Chevron Garden Plaza, the Tishman Plaza, and the Crown Zellerbach Plaza have been indicated on the shadow diagrams. Several errors were made on the shadow diagrams in the EIR, and these have been corrected. The revised shadow diagrams are included on pp. 315-326, under the heading "Staff-Initiated Text Changes." Correction of errors does not result in longer shadows; in one case a 30-ft. building was shown as an 80-ft. building. In other cases, angles shown for shadows of the Ecker Sq. building or the Lincoln Plaza building were slightly incorrect. Note that shadow diagrams for the currently preferred alternative are presented under the subheading, "Alternative E, Design Alternative", on p. 329.

Solar time is "standard" (PST) time. As stated in the Sun Path Analyses diagrams, in order to determine the position of the sun when Daylight Savings Time is in effect, simply move one hour ahead. The path of the sun does not change during Daylight Savings Time, only the manner in which the time is measured.

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### D. EMPLOYMENT, HOUSING AND FISCAL FACTORS

#### OFFICE MARKET

##### Comment

"Page 30 - based on what's already approved and what's up for consideration in the next year, what is the current rate of construction?

"Page 31 - please include all vacancy surveys, no matter how controversial. The figures for the amount of new development in Oakland are way too low. See my other comments.

"Last paragraph. Have costs tripled also?

"Page 32 - current rental information in old buildings seems low. Flood Building is \$18 per year, Mills Building even higher. Please note the inflationary effect of paying those extraordinary rents in San Francisco.

"[V]acancy rate information and trends not up to date as I read the papers. There seems to be an office glut. What about 353 Sacramento?

"San Francisco is not the only office center in Bay Area. Please explain role of other East Bay counties in relation to office growth (back offices), 'clean' industry a la Silicon Valley, Oakland alternative to San Francisco - so that the regional context of development demand for housing, transit, transportation, air quality and encroachment on open space can be seen. Note trend to move many offices out of city because of disproportionate emphasis on executives rather than peons in San Francisco planning policy - even encouraging displacement of such uses South of Market by twisted interpretation of allowable uses in Planning Code." (Sue Hestor)

"Page 31. Do we know the buildings in the East Bay and Contra Costa and San Mateo are being built for relocated businesses from San Francisco? Is this saying that 6 million sq. ft. in Oakland is for relocated San Francisco business? Please say if they are leaving our more reasonable space downtown,



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because we are replacing it with highrises. If the statement is made that most of the building over there is from here, we better start looking at why, and whether we need to keep some of those businesses here and provide the kind of space they need." (Susan Bierman)

"The Draft EIR does not adequately discuss the economic impact of over-build in the downtown core area. The draft EIR briefly notes that the current downtown building trend could result in a commercial office space oversupply. This oversupply could reach a peak in the mid and late 1980's. One of the major effects of an oversupply, which the EIR does not analyze in depth, would be a decline in commercial rents and an increase in vacancy rates.

'Denser development' in the downtown area is cited as a significant environmental impact that cannot be eliminated. The environmental analysis does not inquire into the need for this continued high density development -- it does not inquire into the reasonableness of continued build-up concomitant with a projected over-supply. This inquiry must be made, and a response thereto proffered." (San Franciscans for Reasonable Growth)

### Response

It is difficult to calculate the current rate of construction based on the list of cumulative development with any accuracy because of the number of variables inherent in development. The length of the review process, location and complexity of projects, economic climate and financial circumstances surrounding individual projects, etc., influence construction schedules of each building. With the definition of building completion as 50% occupancy, current construction would have to be well under way (begun in 1982 or early 1983) to be completed in 1983. Major office projects now under construction and expected to be completed before 1984 total 1.6 million total new gross sq. ft. An additional 1.2 million sq. ft. may be completed if current schedules hold. The total annual rate of construction for 1983 is estimated to be about 2,826,900 total new gross sq. ft. (Anne Fredricks, Department of City Planning, telephone conversation, April 21, 1983).

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The discussion of "Vacancy Rates" and "Commercial Rents" on pp. 31-32 has been updated with the current figures from the BOMA and Coldwell Banker surveys. The following replaces the first paragraph on p. 31 of the DEIR:

"On the basis of a 1982 citywide survey of 290 office buildings, the San Francisco Building Owners and Managers Association (BOMA) reported a citywide vacancy rate of 6%./2/ This rate is an increase over the 3.69% rate reported by BOMA in an earlier 1982 survey. According to a December 1982 Coldwell Banker survey, the vacancy rate in downtown San Francisco office buildings (new, existing and major renovations) was 5.7% in December,/3/ compared to a September rate of 3.6%. The current 5.7% vacancy rate is the sixth lowest in the nation among major downtown financial districts./3/ For comparison, the December rate is 10.3% nationally; 8.3% for Chicago; 3.3% for downtown Manhattan; and 10% for Dallas./3/"

Footnotes /2/ and /3/ on p. 34 have been replaced with the following:

"/2/ Elmer Johnson, Building Owners and Managers Association, telephone conversation, December 22, 1982.

"/3/ Coldwell Banker, 'Office Vacancy Index of the United States,' December 31, 1982. San Francisco vacancy rates are part of a national survey of 24 major downtown districts conducted quarterly. A copy of the December 31, 1982 survey is on file and available for public review at the Office of Environmental Review, 450 McAllister St., 5th Floor."

An update of the Grubb and Ellis survey given in the first sentence of the second paragraph on p. 31 is not possible. This survey has been updated but the information is considered proprietary and is not available to the public (Bill Wilson, Vice President/Sales Manager, Grubb and Ellis, telephone conversation, March 30, 1983). Other surveys referred to in the comment are not known to the EIR authors, nor are they possible to trace without a specific reference.



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The 353 Sacramento St. building was recently sold by its developer. Rate of occupancy in that particular building probably reflects individual problems not related to citywide or downtown-wide office occupancy activity.

Despite an increasing office vacancy rate, the demand for office space in San Francisco is relatively strong compared with that in other metropolitan areas in the United States. This fact is reflected in comparatively high rents for office space and a continuing low vacancy rate. A vacancy rate of 5-6% is considered to be the normal rate in an active market. The vacancy rate experienced in San Francisco indicates a continuing demand for office space. The increase in the downtown vacancy rate from 1981 to 1982 may be attributable to several factors, including an increase in the amount of available office space (due to new space being completed and space being available for sublease), a short-term decrease in the demand for office space, and the national economic recession.

The figure of 6.0 million sq. ft. of office space in Oakland quoted on p. 31 is the most current estimate provided by the City of Oakland Planning Department. The City of Oakland no longer prepares the reports that information was taken from, in view of uncertainties as to how much development will actually take place in the City (Anu Raud, Planner, Oakland City Planning Department, telephone conversation, May 27, 1983).

Costs associated with office property offered for lease have increased in the last decade as well as rents charged for office space. These costs include salaries, insurance, income taxes, business taxes, property taxes where major renovation or new construction has occurred, and materials and personnel costs involved in maintenance and operation. The rates of increase are different depending on the category and the property, and are difficult to trace accurately.

## VIII. Summary of Comments and Responses

The discussion of annual rents for commercial office space on pp. 31-32 of the DEIR has been updated to reflect current averages. The last paragraph on p. 31 and continuing on p. 32 has been replaced with the following:

"Because of historically high demand and increased construction costs, interest rates, land prices and operation expenses, annual rents for commercial office space in the downtown Financial District have tripled in the last decade (from \$8.50 per sq. ft. in 1970 to about \$30 per sq. ft. in 1981)./6/ Current annual rents in older buildings in the Financial District are less expensive than those in new highrises, averaging between \$20-\$35 per sq. ft. and \$12-\$28 per sq. ft. south of Market St./7/ San Francisco annual rents now average \$35 to \$50 per sq. ft. in new high-rise buildings. These compare to average commercial rents in Oakland of \$15 per sq. ft.; on the Peninsula of \$18-\$30 per sq. ft.; and in Contra Costa County of \$18-\$20 per sq. ft./7/ Should the recent rise in vacancy rates continue, the upward pressure on current and future commercial rents would be expected to decline proportionately in San Francisco and outlying areas. Such market conditions could be beneficial to future lessees of office space."

Footnotes /6/ and /7/ on p. 34 have been replaced with the following:

"/6/ Department of City Planning Memorandum to the City Planning Commission, 'South of Market Interim Controls,' January 26, 1982.

"/7/ James Osmond, Senior Broker, Coldwell Banker, San Francisco Office, telephone conversation, January 4, 1983; Mr. Emory, Senior Commercial Real Estate Broker, Grubb and Ellis, San Francisco Office, telephone conversation, January 3, 1983; Scott Newman, Senior Broker, Coldwell Banker, Oakland Office, telephone conversation, January 6, 1983; and Jan Lunquist, Coldwell Banker, San Mateo Office, telephone conversation, January 6, 1983."

The EIR states, on p. 31, that one effect of the shortage of office space in San Francisco (reflected in low vacancy and high rental rates) has been



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"to stimulate office development and increase demand for existing office space elsewhere in the Bay Area." Further discussion follows on p. 31 in the second paragraph.

Regional office development projected in parts of the Bay Area may have impacts on transit, traffic, solid waste disposal and air quality. Whether, where, when and in what amounts such development may occur are dependent on a number of factors which are beyond the jurisdiction of San Francisco. Two such factors are 1) the exercise of zoning, planning and environmental review authority by other jurisdictions and 2) the rate of employment growth throughout the Bay Area.

The following information is provided to describe the possible effects of cumulative office development throughout the Bay Area, and to explain the regional government structure that exists to address the issues of the effects of cumulative development.

San Francisco is the center of a nine-county region with peripheral activity centers in each of the other counties comprising the region. Recognizing the interdependence of each part of the region, local jurisdictions have entrusted regional planning, and implementation of adopted policy measures where appropriate, to regional agencies. Responsibility for the comprehensive regional plan is vested in the Association of Bay Area Governments, the agency which forecasts regional growth. The Metropolitan Transportation Commission is responsible for coordinating regional transit and vehicular plans and policies. The Bay Area Air Quality Management District is responsible for maintaining and improving adherence to air quality standards. These and other regional agencies coordinate their planning and implementation activities on issues of mutual concern.

Long-range planning by the regional planning entities, and planning and implementation by operating agencies such as the Golden Gate Bridge, Highway and Transportation District, has enabled the Bay Area to absorb the growth that occurred between 1960 and 1981. The continued ability of

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the Bay Area to absorb growth is dependent upon actions by the regional planning and operating agencies to anticipate and prepare acceptable policies for future regional needs, and upon the capability of the operating agencies to implement such policies.

Within this planning framework, development is proposed in each of nine counties in the region. Comprehensive plans for individual jurisdictions and large development proposals that are subject to environmental review under CEQA are also subject to review by the regional agencies. These agencies review specific proposals to determine the conformance of each to approved regional plans.

Regional housing projections, prepared by ABAG, are presented in Table C-1, on p. 407. These housing projections and other ABAG projections of population and employment contained in Projections 79, (ABAG, 1979) are based on assumptions concerning demographic and economic trends, local land use policies, and transportation infrastructure. Between 1980 and 1990, total Bay Area population and employment is expected to increase by 564,500 and 314,700, respectively. According to Projections 79, San Francisco resident population is expected to decline by about 9,600 while employment in the City would increase by about 68,500.

The impact analysis in this report focuses upon capacity available within the 1982-1990 planning period. Decisions as to when major capacity increases in facilities serving the region will be needed are made by implementing and operating agencies in the context of planning done by regional agencies.

The amount of physical development that can be absorbed in the Bay Area is constrained by the rate and amount of economic growth. Physical development occurs in response to perceived demand for the type of structure to be built. If there is no perceived demand, physical development will not occur. For example, in the 1970's large shopping centers were proposed in San Mateo, Foster City and Redwood City. Only San Mateo's Fashion Island was built, because that Peninsula area could



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support only one shopping facility (and expansion of existing centers, such as Hillsdale). Similarly, market forces limit the amount of office space that can be occupied in the Bay Area during a given forecast period because the demand for office space is finite. If a large amount of office space were to be built in Oakland, it would satisfy a portion of the regional demand. Then, not all of the proposed office space in San Francisco would be built or, if it were built, it would not be fully occupied. This EIR contains a worst-case analysis of cumulative development for downtown San Francisco because it assumes that all projects that are under formal review, approved, and under construction in downtown San Francisco would be built and fully occupied.

Employment growth will be distributed throughout the Bay Area where facilities to accommodate that growth -- including transit systems, infrastructure improvements, office space and housing -- exist, are used most efficiently, or are constructed. The amount of office space that can be occupied in the region during this decade is limited by many factors, particularly regional employment growth.

High rental rates in downtown San Francisco buildings are one factor in relocation of San Francisco businesses to other cities. While new buildings have some of the highest lease rates in the City, older buildings in the downtown core have experienced increases in rates as well. Rental rates are a function of demand as well as costs for operation and/or construction. Office space in San Francisco is used for many corporate headquarters, and office rents in downtown San Francisco are generally higher than suburban office rents. Trends in San Francisco office space composition show a higher proportion of professionals and managers to clerical and support staff when compared with employment in suburban offices. The trend of office space development in suburban counties is noted on p. 31. The information on p. 31 is from the following source, which is added as footnote /4b/ on p. 34:

"/4b/ Association of Bay Area Governments (ABAG), April 1981, Bay Area Office Growth, Working Papers on the Region's Economy, Number One."

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The reference "/4b/" is added at the end of the sixth sentence of the second paragraph on p. 31.

Movement of offices to suburban areas would not change the total regional employment. It is presumed that any new buildings constructed as a result of moves to suburban areas would receive proper environmental review by the appropriate jurisdictions.

The project complies with the Planning Code; because of its location in the C-3-0 (Downtown Office) district, no aspects of the project required special interpretations of any City codes.

The EIR evaluates impacts of the project as proposed. The EIR's purpose is not to assess the "need" for projects. Inhibited demand and an expansion of the office supply (indicated by the recent rise in vacancy rates) would reduce upward pressure on lease rates, which could result in reentry of some firms into the downtown San Francisco office market. Whether prices have actually been reduced is questionable (price is not the rate which is asked, but the rate which is paid; the asking price may go down but normally would be unlikely to be less than previously received for the same space).

As supply continues to approach a balance with demand (which is likely given the number of buildings nearing completion and approved) price pressures will continue to diminish and a greater number of tenants with wider income ranges will have access to downtown space. Judging by the number of proposed office buildings, office building developers apparently expect continued demand, although not at the same level experienced in 1981.

### EMPLOYMENT

#### Comment

"Page 30 - describe uses and employment before acquisition."



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"[H]ow much rent were those tenants that are being displaced paying? What kind of people did they employ? Are they the kind of diverse, not particularly highly skilled businesses that the C&I element wants to retain? Will they go out of business? Will they have to raise their rates to pay the higher rents?"

"Page 72 - this project would not create new long term jobs. It would just accommodate them. Document job creation if you are going to claim it. If people are just moving around in San Francisco or the Bay Area, it is just moving around jobs. If jobs are being relocated from other cities, especially from areas with a depressed economy such as the midwest, the impacts may be to destroy jobs and cities elsewhere. Please tell us where the jobs come from.

"Space does not equal jobs. Just because space may be available does not mean that it will be filled.

"This project does not appear to meet the goal of social equity. Please explain why a project for upper income executives should be allowed to displace current uses and potential users who could afford the lower rents for that space and why downtown space should be exclusively allocated to people in perhaps the top 10% of the economic scale (p. 5 of Commerce and Industry Element). Ditto for goal of environmental quality - 'the pursuit of employment opportunities and economic expansion must not be at the expense of the environment appreciated by all.' Please explain how this will also meet the economic vitality goal of a 'diverse' economy - isn't this just more of the same? What are the social benefits of a project catering to the rich and generally well-off (Objective 1, Policy 1 [Commerce and Industry Element]). Objective 2 [Commerce and Industry Element] - 'excessive dependence on the "fire" sectors also has implications for personal lifestyles, as more and more residents are dependent on office 'paper jobs' for their livelihoods. Please analyze project against that statement and goal/objective of keeping city base diverse, rather than heavily concentrated in 'fire' uses.

"Obj. 2, Policy 1 - talks about availability of parking as one of factors that will keep businesses in town. This project will displace a major parking facility. Isn't this a 'non-attainment' of that goal? Obj. 3 - 'provide

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expanded employment opportunities for City residents, particularly the unemployed and economically disadvantaged.' The employment mix currently on site (and before any recent moves/evictions) need to be matched, proportionately, against the project under consideration. Will the unemployed get a few janitor jobs, and lots of access to high paying upper management professional jobs?" (Sue Hestor)

### Response

The uses and employment of the existing site buildings "before acquisition" are the same as at present, and are as described on p. 30.

The garage on the site is leased by a parking corporation, and is one of several operated by the corporation. The corporation would not go out of business as a result of closure of the garage. Parking rates, like prices charged for most goods and services, are more a function of supply and demand than costs of production. Parking rates in San Francisco are thus generally highest nearer centers of activities (i.e., the core of the central business district) where demand is high in relationship to supply. However, whether or not the corporation would lease new facilities to replace those at 71 Stevenson St. is not known and any discussion of potential rent and rate increases is speculative. The project would also displace existing on-site parking employment. Whether these employees would be let go or sent to other garages would depend on conditions if and at the time the garage is closed.

"Provided" in the first sentence on p. 72 is replaced with "accommodated".

"Created" in the first sentence in the third full paragraph on p. 74 is replaced with "accommodated".

The increases in available office space will allow an expansion in the office employment sector in the City of San Francisco. New jobs would be accommodated somewhere in San Francisco, but not necessarily in the



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project. New employment growth due to the project is discussed in detail on p. 74. As stated in the second full paragraph on that page, "... new office space would be primarily occupied by existing San Francisco businesses that would relocate ...." The third paragraph on p. 74 states, "New employment growth due to the project would occur as new jobs were [accommodated] in older buildings that would be vacated by project employees. As tenants for the project are not known, it is impossible to predict which buildings would be vacated for the project (and which buildings would be then vacant to fill the former level of vacated space). For the above reasons, it is not possible to precisely quantify new employees due to the project."

The footnote at the end of the third sentence of the second full paragraph on p. 74 is changed from "/3/" to "/4/."

Tenants that would occupy the project, exclusive of existing San Francisco businesses, would probably be relocating or expanding Bay Area businesses or new businesses. Though the possibility exists, the likelihood cannot be predicted.

The Transportation Element of the Comprehensive Plan discourages the creation of new long-term parking in the core, and encourages changing existing long-term parking to short term. The project would reduce the long-term parking on the site. In response to concerns over the loss of parking, the sponsor has introduced "Alternative E, Design Alternative." This alternative would include short-term parking space to accommodate existing and project-related demand. See the response on p. 286, under the subheading "Parking" and the discussion on p. 383, under the subheading "Alternative E, Design Alternative," for more information.

Portions of this comment concern broad social questions which are not within the purview of CEQA and do not relate to the effects of this project on the physical environment. The project as a whole would accommodate approximately 1,325 permanent full-time jobs with salaries ranging from the clerical level to the management level. The project would also provide additional jobs in other sectors of the economy through

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a multiplier effect. Potential tenants of the building have not been identified; employees and clients of project tenants would be likely to derive from many socio-economic levels, not necessarily exclusively from upper-income levels. Objective 3 is intended to be applied citywide, embracing all types of economic activities. The quoted objective and its policies, including Policy 2, are directed toward overall public efforts rather than site-specific private efforts.

The project site is in the limited C-3-0 portion of downtown San Francisco designated for office use by the City Planning Code. Diversity is achieved through the overall mix of economic activities in the City consisting of retail, hotel, entertainment, service, wholesaling, shipping and manufacturing uses found in the other districts zoned primarily for each of these uses.

The "FIRE" sector referred to is finance, insurance and real estate, three classifications of activities occurring in the Financial District. As noted in the previous paragraph, the economic diversity of the City is achieved by the overall City-wide mix of activities. Each component of these activities is found in zoning districts in which zoning regulations are geared to the protection and enhancement of each kind of activity.

About six persons are currently employed on the site as parking valets or building managers. The project will more than match this level and type of employment.

### HOUSING

#### Comment

"Housing - another factor in the cost push is the extraordinary amount of demand being pumped into the market by office development projects that are being added without commensurate development of housing. Note that the increased housing costs in area match the increased amount of office development and that the latter is pulling/pushing up the costs of housing.

"Housing analysis - you keep stating that you cannot provide information on



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housing demand because of lack of information on work force, yet the EIR is so certain about number of jobs created. Please explain discrepancy.

"Page 74 - what is the agreement between developer and City regarding OHPP obligation? Please provide details." (Sue Hestor)

"Page 74. What agreement with OHPP exists? Please give details of that, about the housing.

"Page 73, housing. Does the Planning Department use 15 to 30% figure and recognize it? I thought we recognized our 40% figure in our calculations. Please explain.

"In the last sentence, why do we exclude retail and janitorial from housing need figures? It is as though those people don't need to live here, and those people probably have more need to live here.

"Page 76, the last paragraph regarding housing. 'If available' should follow San Francisco.

"Page 85. Please delete 'although there is some dispute' from the last line of the first paragraph. I think it is about gentrification. Unless that dispute is verifiable." (Susan Bierman)

"[F]or regional impacts and housing impacts, the Department, rather than requiring '100% certain' analyses of housing built, under construction or approved in each of the nine counties since 1980, relies on 'Projections 79', an ABAG planning document written when interest rates were low, the economy booming and housing was being built. To determine how much housing will be built by 1985, the Department could contact each county planning department (including itself) and determine how much housing is actually planned based on existing construction and permit approvals. Similarly each county could state how much office or industrial development is under construction, approved or under formal review in that county. In this way housing demand and supply could be accurately forecasted on accurate information reflecting actually projected real commercial and housing development.

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"I disagree [that mitigation of the project's housing impact through the provision of 289 housing units or the equivalent according to the OHPP would mitigate the project's impact on the San Francisco housing market]. A developer can pay \$6,000 per credit into a housing fund to satisfy this requirement. A \$1,734,000 payment by the developer would therefore satisfy this mitigation requirement. Since the average dwelling unit in San Francisco now costs \$151,000, this would mean the construction of approximately eleven housing units. I do not believe the construction of 11 housing units when 289 are needed is substantial mitigation. Asking for 6,000/151,000 (4%) of the cost of a housing unit as mitigation for an impact which requires one housing unit is not substantial mitigation. Further, ... there is no requirement in the OHPP which requires housing units to be of primary residence nor [does the Department] place a limit on the price of a residence. Since the problem which is being mitigated is the imbalance between housing supply and demand for affordable housing of new employees, the Department statement that residency or price do not count when fulfilling the OHPP requirements brings into question whether the problem which the EIR states is adverse is the problem which the OHPP mitigates. Therefore, because the housing mitigation is not substantial (i.e., mitigating only 4% of the problem) and because there is no assurance that the OHPP mitigation measures will mitigate the adverse housing impacts, I believe the approval of this project should not be allowed because of unmitigated adverse environmental impacts.

"The Department asserts that 40% of the people who will work in this project will reside in San Francisco. The resolutions certifying individual project EIRS have in the past indicated a specific need for housing in San Francisco, which is also found in the approval resolutions. Commission resolutions find that the OHPP will mitigate the housing impacts. This is not true, because OHPP mitigation is based on housing credits not housing units. The OHPP further allows that multiple credits be allowed for multiple bedroom units no matter what the cost of the units, and no matter whether they are actually occupied by bona fide residents who are part of the demand created by the project. By allowing multiple credits and credits for housing way beyond the affordability level of the majority of the employees in the project who will need housing the developer may only be providing 25 to 50% of the amount of



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housing needed, and it may be virtually nothing when it is looked at in terms of whether the workforce in the building would be able to afford that housing. Further, the EIR fails to point out the glut of high-priced housing currently available on the market, and that the OHPP may very well result in an increase of that unnecessary housing, e.g., Washington/Montgomery condos, 333 California condos, 333 Bush condos, 388 Market condos." (David Jones)

### Response

A study prepared by Recht Hausrath & Associates (RHA), "The Feasibility of Performing a Housing Affordability Analysis Relevant to Office Growth in Downtown San Francisco" (July 1982), addressed the issue of housing prices related to office development. This study is available for public review at the Office of Environmental Review, 450 McAllister St., 5th Floor.

According to RHA, historical data indicate that rising housing prices are due only partially to local employment growth. Between 1975 and 1980, housing prices increased more than 140% in all Bay Area counties, growing fastest in San Francisco. During the same period, employment grew least in the City compared to the surrounding counties. The study states (p. 38), "Employment growth and resulting increase in housing demand do not, therefore, fully explain San Francisco's rising housing prices. If job growth were the sole determinant of price increases, prices should have risen least in San Francisco."

RHA did note, however, that growth of the housing stock was slowest in San Francisco. "Part of the explanation for San Francisco's faster price increases may be that employment growth in relation to housing stock growth was fastest in San Francisco." (p. 38). The study concluded (p. 40) that, "factors besides job growth are responsible for the majority of the increase in San Francisco and other Bay Area housing prices. These other factors include changing lifestyles and preferences, changing demographic and household characteristics, rising household incomes, the attractiveness of the Bay Area as a place to live, the availability and cost of financing, the attractiveness of real estate as an investment, 'no-growth' policies in some communities, the increasing scarcity of land

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in others, and many other factors. Most of the increase in San Francisco housing prices probably would have occurred even if there had been less employment growth or more construction of new housing in the City." (Emphasis in the original.)

Quantification of households that would be attributable to the project is discussed in the last paragraph on p. 73 and continuing on p. 74. The discussion of housing affordability on p. 76 explains some of the uncertainties involved in such an analysis. A more in-depth analysis is not possible because relevant data are not available. The EIR uses available data and makes reasonable assumptions to analyze the housing impacts of the proposed project.

The net new employment growth in the City due to an office project is difficult to estimate. Increases in the amount of office space do not result in new jobs; new employment is evidenced when space is occupied over and above previously occupied levels. Impacts discussed in the EIR are based on the assumption that the net new office space that would thus be developed on the site would be fully occupied. The net increase in on-site employment would be about 1,390 jobs due to the project, including about 1,370 office jobs (see Table 5, p. 64). The housing impacts of the project, using the OHPP and 101 Montgomery St. Final EIR formulas, were calculated using these employment numbers (see pp. 65-66). The projected payroll tax revenue from the project also uses the net increase in on-site employment of 1,390 jobs (see p. 70). The fiscal analysis in the EIR also projects the net increase in revenue that would be generated by on-site activities on the assumption that the project would be fully occupied.

The project sponsor and California Jones Company have entered into an agreement with the City (approved by Dean Macris, Director of Planning, on January 27, 1982) that entitles them to 610 housing credits under the OHPP Guidelines. The sponsor would apply 289 of these credits to the 71 Stevenson St. project. The sponsor, in conjunction with California Jones Company, will donate \$2.44 million to the City Housing Authority for the purpose of rehabilitating and converting units within the Yerba Buena



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Annex Housing Project to residential units for senior citizens. The agreement does not specifically state how many residential units are involved. The OHPP guidelines do allow multiple credits for low- and moderate-income housing such as those that would be provided for senior citizens in the Yerba Buena Annex.

The housing units that would be rehabilitated as a result of the contribution by the project sponsor would not necessarily house any office workers. The increased supply of housing, however, would meet some of the demand for housing in the City and thus reduce the demand for other units. The OHPP Guidelines do not require the sponsor to demonstrate that the housing agreement with the City would result in housing to fill the demand by project office workers directly.

The formula on p. 73 is from a study prepared by Recht Hausrath Associates, economists, included as Appendix C in the 101 Montgomery St. Final EIR, certified by the San Francisco City Planning Commission, May 7, 1981. This information is contained in Footnote /3/ on p. 86. Because there is no absolute information on exactly who would work in the proposed project, the intended purpose of this second formula is to provide a range of information for consideration by the City Planning Commission.

Retail and janitorial employment is excluded from the calculation of housing demand for several reasons: this type of employment is not likely to attract new residents to the City; it is more likely to be filled by secondary income earners (students, retirees, spouses or adult children who are not the head of household) and thus is less likely to result in the demand for additional housing units; and information regarding housing demand for these types of employment is not documented as it is for office workers.

As stated in the second sentence of the first full paragraph on p. 76, the housing affordability discussion is presented without regard to housing availability.

The phrase, "although there is some dispute", in the last sentence of the

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first paragraph on p. 85 has been deleted. The last sentence now reads as follows:

"It has been suggested that gentrification -- the replacement of low-income households by more affluent ones -- would occur."

The ABAG study, "Projections 79", was not completed during a period of low interest rates, a favorable economy or high levels of housing production, and was not based solely on the historic rate of housing production or the cost of housing, but rather included the zoning classifications and economic projections of employment in various sectors for the Bay Area as a whole. In 1976, interest rates began an upward spiral; many banks began refusing to provide mortgage funds at all. Oil embargoes occurred in 1974 and 1976 with consequent rapid increases in the inflation rate. While some economists are predicting the start of a recovery beginning in the second quarter of 1983 (reflected in reductions in the unemployment rate and interest rates), no substantial signs of recovery or upswing have occurred in prior recent periods. As noted in the RHA study referenced above, the period from 1975-1980 in San Francisco was one of concomitant low growth rates in employment and the housing stock.

The analysis of regional housing demand based on regional office development represents a best effort to provide information for decision makers; attempts to apply district-specific, employment-type-specific, demand-specific formulas (the housing formulas contained in the OHPP Guidelines and the 101 Montgomery EIR) to the region, for uses other than office, necessarily introduce some errors and inconsistencies. Even if the formulas could be proven to be reasonably accurate when applied in this fashion, many jurisdictions do not maintain up-to-date rosters of development applications for housing, office and industrial developments. A researcher would be required to visit the planning offices (of both counties and cities) and compile a roster by counting individual applications. The rosters would then require continual updating. Such an effort is beyond the scope of environmental analysis required for an individual project. The cumulative city and regional analyses must be based on the most reasonably reliable available information.



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The comment implies that if the sponsor supplied 289 units at a price of \$151,000, the housing demand from the project would be met. Implicit in the comment is the assumption that the sponsor must provide a 100% subsidy; that is, present a home or apartment to every newly created San Francisco household resulting from construction of the project. The EIR does not and cannot define the housing which would be affordable to employees in the project. A direct new-unit/new-household program cannot be established since the net new San Francisco employment due to the project could occur in the project itself or in some other building in the City. The problem of a housing supply imbalance can be approached only indirectly, and this is what the Office/Housing Production Program attempts to do. The net result of the Program has been an increase in the overall supply of housing, primarily in the low- and moderate-income range. These are the types of units that are the least likely to be produced without some type of support, and that house the market with the greatest difficulty in obtaining housing.

### MUNI FINANCING

#### Comment

"The funding of public transit systems and the ability of transit systems to make capital improvements have been drastically affected by the passage of Proposition 13 and the decreased federal funds for mass transit contained in federal FY 81, 82 and 83 budgets. In addition, specific Muni transit studies have been done to determine the incremental cost of providing transit service to the downtown area as a part of City prepared or financed studies for the 'one time' transit hook-up fee and the Downtown Transit Benefit Assessment District. It is therefore improper and unreasonable to base EIR analysis on telephone conversation with Bruce Bernhard of Muni (p. 86). Because of the incredible public debate on Muni costs, the EIR must provide accurate, up-to-date and objective estimates of the costs of providing those services and the availability of funds to cover those costs.

"Discussion of the analysis used to determine the \$5 per sq. ft. one time fee for transit mitigation [should be included in the EIR]. This should include a

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discussion of what incremental cost analysis was used to determine the capital and operating costs to Muni and indicate that although the actual costs to totally mitigate the project's impact on Muni was in excess of \$9 per sq. ft., the Board of Supervisors only asked for partial mitigation at \$5 per sq. ft.

"The transit analysis for fiscal impacts on Muni should utilize either the incremental cost figure from the one-time fee determination or the Downtown Transit Benefit Assessment District. Since the City and PUC spent hundreds of thousands of dollars on these analyses, they should be explicitly cited in the EIR rather than independent analyses using a phone conversation as the basis.

"The transit mitigation measure states that the project sponsor shall contribute funds for maintaining and augmenting transportation service, in an amount proportional to the demand created by the project through an equitable funding mechanism developed by the City. The resolutions approving individual development projects ordinarily state that this mitigation measure will mitigate the adverse transit impacts associated with this project.

"SFRG is concerned that because the implementation of this mitigation relies on actions which may or may not occur, the reduction in the transit impacts assumed by this mitigation measure may never be realized. The success of this mitigation measure is directly related to the ability of the Planning Commission or the Board of Supervisors to establish a transit mitigation mechanism.

"A discussion [must be included in the EIR] of what amount of money for transit is necessary for a project sponsor to pay 'an amount proportional to the demand created by the project.' Also a discussion of the most recent city plans to collect this money. If current city proposals ask for less than 'an amount proportional to the demand created by the project,' what is the rationale for the current city proposal not implementing the language regarding the proportional share.

"Does the Planning Commission have the right to establish an equitable funding mechanism or must this be done by the Board of Supervisors? If the Planning



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Commission, by itself, has the right to do so pursuant to CEQA, why has it not implemented such a mitigation?

"How will the City enforce this mitigation measure?

"If a building needs a certificate of occupancy before the developer has paid the amount to mitigate the adverse transit impacts found by the Commission, will the City allow the Permit of Occupancy to be issued? If so, what is the rationale for allowing a project sponsor to occupy a building and thereby create an adverse impact without the mitigation required by the Commission resolution?

"By what date, if the Planning Commission or the City are unable to establish such a mechanism, will the Planning Commission determine whether or not this mitigation measure will result in implementation?

"... [T]ransit impacts have not been mitigated. The Department performed a study stating that a one-time fee of over \$9/sq. ft. was necessary to mitigate Muni impacts. There is no rationale for why the Commission and the City is only requiring a \$5/sq. ft. fee. The project should not be approved until there is total mitigation unless the reasons for not requiring mitigation are included in the Commission's approval resolution. Furthermore, the City has yet to collect transit fees from previous project sponsors, and there is no assurance that the City will collect the one-time transit fee. Because the transit fee is insufficient to mitigate the adverse transit impacts of this project and because there is no assurance that it will be collected, this project has insufficient transit mitigation and the project should not be approved." (David Jones)

"Page 81 - how will the Muni bonds be paid off that will provide the additional equipment? The Macris document never went to public hearing. Does the Muni concur in that assessment? The PUC? If development occurs away from the regional carriers' lines (especially BART) there may be additional demand on Muni for connections to it. Especially if that development occurs south of Market.

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"The cumulative costs to Muni for equipment are considerable, yet the entire focus here is on the subsidy per rider. But on what equipment? Please incorporate Carl Imperato's comments on Muni formula used in Spear/Main Draft EIR. You are still using the same data, so his comments are still relevant. The transit fee is in litigation and the Commission has shown no will to require payment as a condition of approval, i.e., guarantee payment will be there by time building opens, not merely a hope that the courts will sustain the fee and Board of Supervisors won't undo it.

"Consider impact of absolute requirement of payment of money for additional Muni service, not merely a 'maybe' contingent on litigation. How do you know there will be ANY mitigation from this measure? Please quantify.

"Add - Assessment District [as a mitigation measure]." (Sue Hestor)

"Page 3. Is the annual subsidy requirement of Muni of \$70,100 for current Muni or improved Muni? Please explain that." (Susan Bierman)

### Response

An analysis of Muni costs related to downtown office development, the Transit Assessment District Cost Study, was published by the Office of the City Attorney on October 1, 1981. The data in this report do not provide an appropriate basis for determining the costs to Muni of a single office project. The data contained in the study were generated to calculate the current net deficit of Muni operations on a per sq. mile basis. The study also contains data on operating costs per passenger mile and revenue per passenger trip. The total number of downtown passenger trips was not determined, however, for the study. According to Bruce Bernhard, Manager, Analysis Unit, Public Utilities Commission, Bureau of Finance (telephone conversations, October 26, 1982 and April 7, 1983), the net deficit per passenger trip cannot be calculated from the data provided in the assessment district cost study. Mr. Bernhard states that data are not available that would enable costs per sq. mile to be translated to a per-passenger-trip basis as would be required for an analysis of a proposed project.



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The "Transit Development Fee Cost Analysis" prepared by Muni indicates that the marginal cost to Muni of providing service for the economic life (45 years) of an office building would be about \$9 per sq. ft. of office space. The lifetime costs to Muni attributable to the project would thus be about \$3 million. The annualized cost would be about \$66,000. Another method of determining costs to Muni attributable to the project is contained on p. 80. On the basis of about 180,000 trips per year that would be generated by the project and a net marginal cost of \$0.39 per ride, the annual cost deficit to Muni due to the project would be about \$70,100 (see footnote /10/, pp. 86-87). This is based on maintaining the existing level of service, not an improved level of service after implementation of measures in the Five-year Plan. This cost estimate is greater than that estimated using the \$9 per sq. ft. lifetime cost as suggested in the comment. On April 27, 1981, Ordinance 224-81 was adopted which established a one-time transit fee of up to \$5 per sq. ft. per gross sq. ft. of new downtown office space. The Ordinance is now the subject of a class-action suit in Superior Court. The \$5 figure was a policy decision made by the San Francisco Board of Supervisors, the legislative body. The ordinance does provide for annual recalculation of the assessment fee. Should the one-time \$5 per sq. ft. fee be upheld, the project would generate an additional \$1.6 million in revenue to Muni, or about \$36,000 annually.

Implementation of Ordinance 224-81 is directed by the Public Utilities Commission (PUC) under the procedures spelled out in the Ordinance. Under these procedures, developers must submit information regarding floor area of the building upon which the appropriate fee may be calculated. Certificates of completion and occupancy will then be issued upon receipt of any installment payments that are due. The PUC Finance Department is currently in the process of implementing the Ordinance wherein collected monies are held in escrow until the pending suit is settled.

The imposition of an absolute requirement for payment of money to Muni as suggested in the comment would be beyond the scope of powers vested in the City Planning Commission, without the existing ordinance or a similar ordinance adopted by the Board of Supervisors.

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The transit assessment district is not currently under consideration for implementation by the Board of Supervisors. Imposition of this measure without prior adoption of an ordinance by the Board of Supervisors is beyond the scope of powers vested in the City Planning Commission. Ordinance 224-81, if upheld by the court, would be an absolute requirement of payment of fees. The manner and method by which the City will raise funds for Muni must be addressed by the City, and is beyond the scope of the EIR.

While the project is located south of Market St., it is about equidistant from BART and Muni Metro stations and the Transbay Terminal. Demand for additional connections to BART from more distant south of Market locations is not likely to occur as a result of the project.

The calculation referred to in the comment is based on the application of marginal cost analysis methodology to cumulative development (see 135 Main St. Supplement, Final EIR, EE 81.61, certified November 30, 1982, pp. 52-53, for the calculation by Carl Imparato for that EIR). As stated in the comment, the marginal cost data provided by Bruce Bernhard do not include major capital expenditures and additional supervisory and support staff that would be required to service cumulative downtown development. Moreover, there could be additional costs that could increase as ridership increases; other incremental costs, such as the need for more supervisors, overhead (e.g., accountants), new facilities for vehicle storage, and other capital improvements are not included in a marginal cost analysis. The commentator's calculation may underestimate the total cost because the marginal cost data include only variable costs that depend on vehicle trips, including fuel, labor, parts and amortization of the capital costs of vehicles. The methodology used in the EIR is appropriate only for small additions in passengers, such as passenger trips added by a single office building, and is not applicable to a cumulative cost analysis.

A more appropriate technique for determining the costs to Muni of cumulative development would be an average cost analysis which would include both capital and operating costs. Application of this technique, however, was not possible because relevant capital cost data was not



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available from Muni at the time of the EIR analysis. Further, capital costs are difficult to allocate on a person-trip basis as capital expenditures occur from time to time in large amounts, not necessarily annually. The established method of allocating capital costs is through depreciation, which is based on historical depreciation costs, not replacement costs. Such an estimate would be low in comparison with the costs of new capital improvements required for a single passenger trip. The use of existing capital cost data would underestimate future capital cost needs. Existing Muni accounting statistics do not enable future capital costs to be calculated on a per-passenger-trip basis (Bruce Bernhard, Manager, Analysis Unit, Public Utilities Commission, Bureau of Finance, telephone conversations, October 20, 1982 and April 7, 1983).

The mitigation measure on p. 119, fifth paragraph, states that the sponsor would comply with the one-time transit fee ordinance, "or any subsequent equitable funding mechanism developed by the City." Thus, this mitigation does not rest solely on implementation of the one-time transit fee as currently in effect. Further, the transit fee is not the only measure proposed to mitigate transit impacts; the sponsor would encourage ridesharing and flex time to mitigate the project's impacts. The EIR includes, on p. 126, third paragraph, transit impacts from cumulative development as a "significant environmental effect that cannot be avoided."

Muni has recently received grants to purchase new equipment, including \$31 million in federal monies and \$8 million in state monies (Bruce Bernhard, Manager, Analysis Unit, Public Utilities Commission, Bureau of Finance, telephone conversation, May 25, 1983). These funds are in line with the grants Muni receives every fiscal period from these sources. Muni also intends to purchase additional articulated buses with \$21 million it will receive from the General Fund as authorized by the passage of Proposition B in November 1982 (Bruce Bernhard, Manager, Analysis Unit, Public Utilities Commission, Bureau of Finance, telephone conversation, May 26, 1983). Although Muni may also receive additional revenues from the recent increase in the federal gasoline tax, the amount cannot be reliably estimated at this time. All of these revenues are for capital

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costs as opposed to the one-time transit impact fee, which would be used for both operating and capital expenses.

The second paragraph and the first three sentences of the third paragraph on p. 81 have been deleted. The Board of Supervisors deferred action on the Core Area Transit Maintenance District indefinitely in January 1983. The following is added to the end of that paragraph:

"On the basis of the worst-case scenario in the memorandum, the San Francisco Municipal Railway Improvement Corporation, a non-profit corporation established in 1971 for the purpose of selling bonds for transit improvements, may have to raise about \$111 million through the sale of bonds over a 10-year period to finance Muni expansion."

According to Mr. Bernhard (telephone conversations, October 26, 1982 and April 7, 1983), the final version of the Memo from the Planning Director to the Planning Commission contained input from Muni; the PUC generally agreed with the contents of the Memo. The discussion in the memo regarding the necessity for revenue bonds under a "worst-case scenario" was based on information contained in Muni's Five Year Plan. Previous bonds sold by the San Francisco Municipal Railway Improvement Corporation were secured by leasing assets purchased with the bonds to the City. Lease payments have been funded primarily by bridge tolls and other state revenues, although a small percentage has been paid by the General Fund. There is no assurance that state monies will be available to repay future revenue bonds. It is not known at this time whether the sale of bonds will be necessary, or if it does become necessary, when the sale will take place or what the prevailing interest rate will be.

The net deficit per ride to Muni used in the cost analysis in the EIR is based on 1980-81 Muni data, the most recent data that was available when the study was performed. According to Mr. Bernhard, it is very difficult to predict how the deficit per additional rider will be affected by improvements to Muni. Muni has not made any such estimates or projections. Therefore, the deficit is based on Muni without improvements.



BART FINANCING

Comment

"What is cumulative impact on BART with 18.4 or 55 million sq. ft. of development? Where would they get the equipment to provide that service?"  
(Sue Hestor)

Response

It is not possible to project fiscal impacts on BART of cumulative development with the information available. The estimate contained in the EIR of costs to BART which are attributable to the project is based on an analysis of average operating costs per passenger trip prepared by BART. Operating costs per passenger trip reflect the additional cost to BART of additional passengers. This analysis technique is applicable only to small additions of passengers, such as passenger trips added by a single office building. A cumulative analysis would also have to include capital costs that may be necessitated by a large increase in passenger trips.

Capital costs projections made by BART through 1990 are approximate in nature. Capital costs (both existing and future) cannot be prorated by geographic location (San Francisco), time of day (peak hour), or type of rider (office worker). Most of BART's capital expenditures are paid through federal and state revenue sources (Alan Lee, Transportation Planner, BART, telephone conversation, October 8, 1982).

The cumulative peak-hour operating deficit cannot be projected because exact fares and subsidies per passenger cannot be projected to 1990. It can be stated that both fares and costs per passenger trip will be higher in the future than they are today. These higher dollar values, however, will be partly attributable to inflation. BART fares and costs relative to inflation cannot be projected with accuracy. The further projections are made into the future, the larger the margin of error (Alan Lee, Transportation Planner, BART, telephone conversation, October 8, 1982).

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For Fiscal Year (FY) 1981-82, BART attained a net operating surplus of \$7.6 million after applying \$67.3 million in financial assistance from property taxes, the 0.5% BART sales tax and state aid. In 1981-82, BART used \$2.6 million of this surplus to purchase capital improvements (BART 1982-87 Five Year Plan, adopted June 24, 1982).

The BART Five-Year Plan projects an overall operating surplus (after property tax, sales tax and other governmental assistance) of \$60.4 million from FY 1982-83 to FY 1986-87. These funds could be applied to capital improvements by BART to meet cumulative transit needs of the region.

### COSTS TO CITY

#### Comment

"[C]osts to city - This entire section is focused on this particular project, rather than on cumulative impact. It is irrelevant if in isolation the project may not require that much city service if the cumulative amount results in so much congestion, air pollution, urban ugliness that the City has to take enormous steps to undo the mess. E.g., traffic congestion that will result in Muni not being able to function, necessitating huge increases in its budget because of reduced number of runs in rush hour, expenses of changing street patterns, expense of traffic cops to monitor absolutely impassable intersections to make things flow a little.

"Obj. 6 [Commerce and Industry Element] - This project violates Policy 1 in that the social and environmental costs are only matched by benefits that are economic to the developer. The Draft clearly shows that public facilities are becoming strained. Please analyze this project in light of this policy. Policy 3 is also being violated." (Sue Hestor)

"Page 80 under costs. What happened to the language in the EIR's that says, 'Early on, highrises will make money for the City, but as time goes on, they cost the City'? I think maybe later on in the EIR I found that, but it wasn't where I had expected it." (Susan Bierman)



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"At least one study has concluded that the cumulative costs of providing services (including mass transit) may exceed the revenues generated. Because the mitigation measures will not adequately alleviate this transportation crunch, the EIR should more fully justify its rejection of [alternatives] which would reduce traffic impact...". (San Franciscans for Reasonable Growth)

### Response

Impacts of the project on the various community services are discussed in the Initial Study, Appendix H, p. 427. Because of the increase in the number of people served, total costs for community services would be higher than without the project. Increased traffic patrols, if instituted, would represent part of this additional cost. The EIR states, in the fourth paragraph on p. 82, that costs for servicing the site would increase. Costs for community services such as fire and police protection, schools and energy facilities are expected to decline on a per capita served basis.

Objective 6, Policy 1 is: "Encourage continued growth of prime downtown office activities so long as undesirable consequences of such growth can be avoided." The EIR responds to this policy in its analysis of the project in terms of the factors cited in the policy: 1) impact of use of land on parking, congestion, air pollution and energy use; 2) impact of street level winds on pedestrians; 3) impact on noise; 4) impact on scale and character of the city; and 5) impact of increased employment density on existing services and on the housing supply. Policy 3 is directed toward public actions, in this case, to "assure that Downtown development is compatible with the design and character of San Francisco." The City Planning Commission would make a finding of the project's conformity with the Comprehensive Plan objectives and policies, including its social equity.

For a discussion of infrastructure expansion to meet the needs of continuing development, see 81.61E, 135 Main St. EIR Supplement, Summary of Comments and Responses, p. 41, certified November 30, 1982.

## VIII. Summary of Comments and Responses

In summary, the discussion points out that since transportation infrastructure has been increased in the past to meet the demands of anticipated growth, it is reasonable to assume that similar types of planning efforts will result in further increases associated with normal functioning of an urban region.

As shown in Table 6, p. 79, revenues from the site would also increase, although under Proposition 13, property tax revenues would be limited to a 2% increase per year after the initial reassessment, based on the market value of the new building. If the property were sold, the assessment would once again reflect market value at the time of sale, since reassessment at the resale value is permitted by Proposition 13.

The cumulative fiscal impacts of downtown development are discussed on p. 85, under Fiscal Considerations. The discussion on pp. 80-82 describes project-specific fiscal impacts.

See also the response to the previous comments under the subheadings "Muni and BART Financing", pp. 252 and 260.

On p. 85, third paragraph, the EIR states, "According to some of the studies, downtown development could result in an initial fiscal benefit. Since revenues to the City would probably increase at a slower rate than costs, due to Proposition 13 limitations on property tax increases, there could be a time when cumulative costs of providing services to currently proposed and approved development would be higher than revenues provided. This would only be the case if no new revenue sources are found, the rate of new development declines, and proposed development is not sold at some future date."

The EIR states on p. 126, Section IV, Significant Environmental Effects that Cannot be Avoided if the Project is Implemented, third paragraph, last sentence, that, "The project would contribute to cumulative traffic increases Downtown and cumulative increases in passenger loadings on BART, Muni and other transit agencies."



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The EIR evaluates alternatives and provides the sponsor's reasons for rejection. The EIR does not reject the alternatives. Rejection of the alternatives by the sponsor as presented in the EIR does not preclude the City Planning Commission's selecting an alternative instead of the project. If an alternative were approved by the City Planning Commission instead of the project, the sponsor would then decide whether or not to build the alternative. The EIR is an informational document. Statements contained therein are to assist the decision-making body and are not binding on the actions of the decision-making body.

### COSTS TO FIRE DEPARTMENT

#### Comment

"Page 82 - there is no discussion of costs to the Fire Department and the ability of the Fire Department to deal with a major fire in the interior of this block. Please get their input immediately. The hazards that will be created in an earthquake with that density are immense.

"[T]he fire issue [should not have been focused out in the Initial Study]."  
(Sue Hestor)

#### Response

The Fire Department indicates that Stevenson St., 40 ft. wide from property line to property line, would be the access point to the site in the event of a fire on the site. The Fire Department considers Stevenson St. adequate for emergency access to the site (interview by Kaplan/McLaughlin/Diaz, architects, with Chief Emmet Condon and Chief Joseph Medina, February 14, 1983). The Alternative design meets all requirements of the Fire Code. To the extent possible, the design of Alternative E incorporates access points that facilitate the evacuation of building occupants in the event of an emergency. The statement contained in the Initial Study, that the project would not result in the need for additional Fire Department equipment or personnel, except for a major fire or disaster, is based on direct input from the Fire Department.

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The problem presented by a "major fire or disaster" is not one of access to the site because of its mid-block location. The Fire Department maintains personnel and equipment necessary to respond to the most common levels of emergency occurrences. Major fires or disasters are those that may exceed the Department's initial response capability. In the event of such occurrences, personnel and equipment are called in from surrounding jurisdictions to the extent that they can be provided under "Mutual Aid Pacts". These jurisdictions in their turn receive assistance from other neighboring jurisdictions. The response time in such cases is longer than when local stations respond. In the event of a large earthquake in the Bay Area, most jurisdictions would be responding to local emergencies and could not provide assistance to neighbors; state and federal emergency agencies would then respond. It would not be feasible for the San Francisco Fire Department to maintain levels of personnel and equipment to respond to emergencies that are extraordinary.

San Francisco has taken steps to improve emergency response capabilities (for instance, after the "Great Fire" of 1906, an auxiliary emergency water storage and delivery system was installed, primarily in the downtown area, which is separate from the regular fire fighting and domestic water supply and delivery system), and continues to do so. A disaster planning program is currently in preparation under the direction of the Mayor's Office of Emergency Services (see Section H., Emergency Response Plan, p. 115, and Appendix G, Emergency Care Facilities, p. 426). As part of this plan, the 10 Fire Department battalions would operate as separate autonomous districts in the event of a major disaster, and would administer and coordinate all city agencies within those districts. Because immediately neighboring jurisdictions would probably not be able to lend aid after a major earthquake under the Mutual Aid pacts, the Fire Department assumes for disaster planning purposes that the City must be able to operate self-sufficiently for up to 72 hours following the disaster (the above information is from Chief Edward Phipps, San Francisco Fire Department, telephone conversation, May 31, 1983).



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The project would contain life safety measures required by code that minimize hazards from fire: sprinklers, on-site emergency water and power supplies, communication systems, smoke towers, emergency exits, etc. Mitigation measures included as part of the project to minimize earthquake hazards from the project are the preparation of a dynamic structural analysis, installation of windows to minimize damage from falling or breaking glass and development of an emergency response plan for project occupants.

See the discussion on p. 329 under the heading "Staff-Initiated Text Changes, Alternative E, Design Alternative." In the process of developing this design, the architects, Kaplan/McLaughlin/Diaz, met with the Fire Department on two separate occasions to discuss fire access and possible modifications to the design to improve access to the site and circulation on the site block in the event of a major fire or other emergency. The presence of additional streets through the block (Anthony and Ecker Sts.) and the Tishman Plaza (which allows through access to Market St. from the interior of the block) reduce the evacuation problems which would normally be present for major development located in the interior of a block. The Fire Department has indicated that access and the alternative's proposed evacuation system would be adequate (Chief Edward Phipps, San Francisco Fire Department, telephone conversation, May 31, 1983).

### E. TRANSPORTATION

#### CUMULATIVE DEVELOPMENT IMPACT

##### Comment

"In prior comments I asked evaluation of the impacts of Highway 101. Since those comments I have received a copy of the MTC memorandum on Travel Impacts of Proposed Development on the Peninsula Along Route 101 (9/9/82). Please analyze the material in that report and factor the cumulative impact of the 38 projects therein on the ability to move additional downtown workers through

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that corridor and into San Francisco. Among the information in that study: mitigation measures which include widening 101 are not likely, 'encourage ridesharing' not measurable in terms of effect; proposed projects or under construction equal 20 million sq. ft. of retail, industrial, office space, 6,000 new hotel rooms, 7,500 new housing units; Route 101 is at or near capacity northbound from 4:00 to 5:00, already near capacity northbound 7:00 - 9:00 a.m.; p.m. commute hours at level F, E, D for much of area; planned and under construction projects would increase peak hour trips 25% (this does not include trips related to downtown San Francisco developments). ... Please factor that into traffic and air quality analyses. What additional implications does that report have for San Francisco? Can we expect to move people into the City from San Mateo? If not will commute patterns shift from East and North Bay - areas accessible only by bridges (and to a minuscule extent water). Where do we put the next bridge? Will San Francisco have to extend 280 to accommodate peninsula residents who come up 280 instead of 101? What pressures on Mission St. and other San Francisco surface roads as people try to avoid jams on 101?

"It is difficult to understand and break out the information for each aspect dealing with description of current (AS OF WHAT DATE) conditions, conditions that would be incurred when all projects under construction and approved come on line and the conditions that would be incurred with projects currently in the proposal stage. Please specify all of those aspects, and include in the cumulative impact all of the proposals I have listed, which total 55 million sq. ft. (including the Mission Bay project). This is especially important for analysis of streets near freeway entrances/exits or which lead to them (Mission is one such street as is First) and for bridge, highway and transit capacity.

"The figures on [p. 416] for distribution by travel mode don't match those in the 90 New Montgomery EIR. According to that EIR, 82.5% of workers travel in p.m. peak. Even using your grossly low figure of 16.1 million sq. ft., dividing that by 250 sq. ft./worker = 64,400 new workers x 82.5% = 53,130 p.m. peak trips. Where do you have a table that compares Table 8 to existing conditions so that a measurement of the increase and impact can be made? Is it Table 9? Please note on each of these tables the amount of sq. ft. in each



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of the calculations so that we know what is the amount of cumulative development measured.

"Please explain City policy with regard to deteriorating levels of intersection volume. Is it consistent to head toward level F everywhere? So what are we going to do about it? What if cumulative development is 35 million or 55 million new sq. ft.? What impact?

"What is your basis for concluding that people would start sharing rides? What studies? There are already incentives for that in express lanes? What success? What if they don't?" (Sue Hestor)

"Regarding vehicular traffic, how long can we call intersections "F"? When do we start out with the FF or some other designation? How long will the waits be at First and Mission or other "F" locations?" (Susan Bierman)

### Response

The joint Metropolitan Transportation Commission / Bay Conservation and Development Commission (MTC/BCDC) report on employment growth in the Bayshore (US 101) corridor, cited in the comment, contains an analysis of development which could generate about 62,000 peak-hour person-trip ends (Draft Report, Travel Impacts of Proposed Development on the Peninsula Along Route 101, MTC/BCDC, September 17, 1982). The report states that about 10% of the trips would be from (or to) residential uses which could be construed as being already counted by the projections in this EIR. Further, the report states that only 20% of the development would use the 101 freeway north of Millbrae. Once transit use is accounted for, the number of vehicle trips is about 9,000 peak-hour vehicle trip-ends. The report is based on existing vehicle use and occupancy patterns continuing into the future unchanged (the report assumes a 6% transit usage). Thus, the analysis is not sufficient to project actual future demand on the Bayshore, but rather is intended to identify that a change in future travel patterns would need to be made to allow all of the development to take place.

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The EIR discusses the impact of increases in commuter trips into San Francisco as a result of downtown office development. Developments in Oakland, San Mateo, Contra Costa and Marin would generally have little effect on bridge traffic into San Francisco (except that traffic into Oakland from East Bay cities north and south of Oakland would use the same thoroughfares as traffic from those directions moving into the City). To the extent that developments in these counties attracted residents of San Francisco, bridge traffic in the contra-commute directions would be increased. Roadways (including bridges) operating in contra-commute directions generally have greater unused capacity than those leading into San Francisco during commute hours; development affecting these roadways would not contribute to cumulative transportation impacts as described in the EIR. See also the response to the comment under the subheading "Cumulative Development," p. 209 of the Land Use section of this Summary of Comments and Responses.

The date of the existing parking data is given on p. 42, note /13/.

Table 9 on p. 90 has been amended to add "(1982) +" under the word "Existing" in the first column.

In that table, the footnote "+" has been added, reading: "Ridership counts: BART, March 1982; AC Transit, composite of weekdays, May 24 and 27, June 3, 6 and 7, 1982; Golden Gate Transit, June 14, 1982; SamTrans, February 1982; Southern Pacific-Caltrans, February 25, 1982."

In that table, the footnote "\*\*\*" has been modified to read: "1982 Muni ridership is approximate, based on a compilation of Muni ridership by Department of City Planning staff. Muni data are the average of the three most recent schedule checks (observations) made by Muni for each route between August 1981 and August 1982."

Intersection Levels of Service were determined based on counts made by the Department of Public Works in January 1981.



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Table 10, p. 95, has been amended to add "(1982) +" after the word "Existing".

The title of Table D-4, p. 418, has been revised to read:

"Existing and Projected Muni Load Factors\* (PM Peak Hour -- Peak Direction)."

The footnote in Table D-4 has been expanded so that the last two sentences read:

"The future load factors have been calculated for existing capacity and do not include any proposed capacity increases. Ridership is the average of the three most recent schedule checks for each route for the months of August 1981 to August 1982, as compiled by the Department of City Planning."

Table 7, p. 88, shows a p.m. peak-hour increase of 48,000 person trip ends, which is comparable to the increase calculated based on a gross estimate of employee travel. The calculation used to arrive at the values shown in Table 8 is based on more rigorous data than is the calculation in the comment. The basis of the 82.5% figure is not statistically valid when applied to the entire downtown. The calculations presented in the 90 New Montgomery EIR are a description of a scenario based on one set of assumptions. The cumulative scenario presented in this EIR is based on a more refined set of assumptions. Alternatively, the employment trend scenario (see Appendix D, p. 420) is based on a third set of assumptions.

As discussed in the text, the total 16.1 million sq. ft. of office space and the 0.5 million sq. ft. of retail space is used as the basis for "cumulative" development in Tables 7-10 and Tables D-3 and D-4. To develop an "existing" set of values for comparison to Table 8, an estimate of the amount of existing travel generated by the entire downtown area would have to be made. All of the "existing" data in Tables 9 and 10 include non-downtown travel. As noted in Table A-1, p. 397, 60.6 million sq. ft. of office space currently exists in the downtown, which (at

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250 sq. ft. per employee) would represent about 242,000 employees. The 16.1 million sq. ft. of cumulative office development with about 64,000 employees would represent an increase of about 26% over existing levels. A list of projects considered in the cumulative analysis, including floor areas, is on pp. 222-24.

The cumulative impact analysis is based on projects that are under construction, approved, or under formal review at the time of analysis. The Mission Bay area is currently the subject of a planning and feasibility study in which several alternatives are under consideration and for which no applications for approval have been received by the City, as the amount and type of development has not been determined for the area. Inclusion of Mission Bay in the cumulative development analysis would result in adding a general concept to a list of specific projects, and therefore it is not included in the cumulative analysis. (See also the discussion on Cumulative Development, p. 212.)

The statement on pp. 95-96 concerning ridesharing mentions two possible alternative scenarios to single-occupant automobile commuting that may occur as the result of the projected increases in downtown employment, unless freeway and parking capacity were to be expanded significantly.

An example of increased vehicle occupancy during peak hours can be seen at the Bay Bridge Toll Plaza where in March 1975 free lanes were introduced for carpool vehicles. In the spring of 1977, vehicle occupancies in the carpool lanes during the 6:30 a.m. to 9:00 a.m. commute period averaged 3.52 persons per vehicle while the other lanes averaged 1.21 persons per vehicle. Average occupancy over all the lanes was 1.53 persons per vehicle (this is because there were more vehicles in the non-carpool lanes). In the fall of 1980, the carpool lane vehicle occupancy had increased to 4.0 per vehicle while the non-carpool lane occupancy had increased to 1.26 persons per vehicle. Overall vehicle occupancy increased to 1.9 persons per vehicle, which indicates a proportionately greater increase in use of the carpool lanes. (Traffic Survey Series A-48 and MA-55, University of California, 1978 and MTC, 1980.)



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A third alternative scenario, a shift of employment out of the City, could result if transportation capacity is not available and commuters are unwilling to alter travel patterns to make use of higher vehicle occupancies or transit.

As discussed in the traffic impact section and in Appendix D, travel assignment is based on existing patterns. Transportation analysis methodology does not assume any redistribution of traffic due to congestion or lack of parking, since redistribution cannot be accurately predicted. With existing patterns of auto use, cumulative office and retail development would increase traffic congestion. City policy is to maintain a workable street system, essentially forcing redistribution. Many of the intersections projected to operate at service level F in other EIRs could be improved, but improvements are not currently proposed because the intersections currently operate at acceptable service levels (Level C or better).

No proposals currently exist to improve intersections projected in the project EIR for Level of Service F (Mission/Main and Mission/Beale). The reduction in service levels for these intersections (from D to F) would occur with or without the project. The Department of Public Works indicates that until review of the proposal to remove the Embarcadero Freeway is complete, changes to intersections involving freeway ramps to this Freeway will probably not be contemplated (Nelson Wong, Bureau of Traffic Engineering, telephone conversation, March 17, 1983). This does not mean that operation of these intersections cannot be improved. However, until the effects (and potential mitigation measures) of removal of the Embarcadero Freeway are known, suggestions to change conditions of the Mission/Main and Mission/Beale intersections would be premature.

Level of Service (LOS) designations for estimating the operation of intersections are qualitative in nature. Table D-1, p. 413, provides general descriptions that corresponds to each LOS rating. As noted in that table, an intersection at capacity is defined as Level of Service E. An "F" rating represents a jammed condition beyond which any further congestion cannot be distinguished.

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### CUMULATIVE TRANSIT IMPACTS - LOAD FACTORS AND PROJECTED CAPACITIES

#### Comment

"It is necessary for the EIR to assume continued existence of present laws and regulatory policies as a basis for environmental impact analyses. The EIR authors cannot assume that legislative bodies or regulatory agencies will modify their policies to accommodate the effects of commercial development policies. If the policy of Golden Gate transit allows no standees because of the extreme length of its commute runs (e.g., Santa Rosa), the EIR must assume the existence of this policy. If the cumulative impacts of commercial development projects in downtown San Francisco would impose a load of 3000 additional passengers on Golden Gate transit, the EIR cannot assume this can be accommodated by allowing 25% standees (to avoid the cost of new busses) as this is contrary to the policy of the District.

"What is the policy of Muni, BART, AC Transit, SamTrans, CalTrans and Golden Gate Transit regarding the allowable loading factor for their transit services? For each of these systems, are there presently loadings in excess of this policy? For those systems which exceed their policy on loading factors, how many additional vehicles are necessary to accommodate existing demand and also be in compliance with their loading factor policies?

"The EIR, in its environmental setting section, must discuss the ability of existing transit systems to meet present demand and still adhere to present policies regarding maximum vehicle loading.

"The environmental impact analysis should indicate the impact of cumulative development on the transit systems and should assume each transit system will attempt to comply with its policies on loading factors. If loading factors become above what is transit system policy, the EIR should discuss the implications of this in terms of time delay, rider safety and rider physical comfort - as well as in disincentives to take transit.

"When cumulative or project specific impacts on Muni and other transit systems are determined, the EIR should specifically discuss the ability of each



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transit system to accommodate the demand. This discussion should include an evaluation of each system's five-year operating plan to determine if the funding sources and assumptions of these plans are still valid. If the ability of a transit district to maintain or increase its services is based on questionable or non-existent federal funds, this must be noted. The EIR should contain a conclusion, for each transit system, of whether the EIR author believes that transit system will or will not be able to provide additional service given realistic funding assumptions. As noted in the above discussion, this analysis must assume loading factors consistent with the transit policies of each transit district.

"[C]an the transit districts implement their five-year plans given current federal, state and local funding projections. ... If the Department will or cannot say whether the planned five-year transit plans will or will not be implemented given the current funding situation in each district, the EIR reliance on these five-year plans to analyze impacts is not accurate, adequate or objective. This information is readily available and public. There is no excuse for the Department to rely on the assumption that these plans are or can be implemented when the accuracy and adequacy of these plans can readily be determined." (David Jones)

"Regarding Table 9, p. 90, 1.11 doesn't clearly show how many will be jammed in over capacity on transit vehicles. It also fails to show really jammed conditions of most of the used lines for this project.

"On p. [347], if one turns to it, is devastating. The 71 Line is up to 1.68. What number does 1.68 stand for on the 71 Line? How many will be stuffed in the K, L, M and N Lines? They are at 1.47. Mind you, '1' is 150% of the space. The 31 Line is 1.54; 3 and 4 Lines are 1.47. How many extra people, bodies would be pushed on to these lines over the standing and sitting capacity? Do Muni figures include 11,500 drivers of autos who won't be able to park? That is the figure of the parking deficit. They should be included, as I note they are predicted to ride or use ride share or use transit. Ride sharers won't be parking, since we are removing most of it. So transit is going to be the answer, and I don't think that we are calculating all those people into the EIR figures." (Susan Bierman)

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"As the Draft EIR notes, the additional ridership from the projected 16.1 million gross sq. ft. of cumulative office development and 0.5 million gross sq. ft. of net new retail development will cause most Muni lines, BART transbay, Southern Pacific, and SamTrans to exceed existing capacity. Even if expansion occurs, some systems will still be over capacity -- this includes Muni and Southern Pacific; while AC Transit would be operating at 99% of its recommended capacity." (San Franciscans for Reasonable Growth)

"Page 36 - Muni plans to increase capacity needs to be updated with latest information on funding and time line for implementation. Also what the percent increase in capacity would be if fully implemented.

"Page 97 - State-Cal Trans plan to extend SP commuter train to Ferry Bldg., or Rincon Annex Bldg., and possible timing and funding." (Yoshio Nakashima)

"How realistic, given funding circumstances, are each of the five-year plans (please ask MTC)? The 90 New Montgomery EIR saw shifts to transit because of parking problems. Please factor in that increase in ridership projected in that EIR.

"At what point is the Muni so overcrowded that people stop taking it?

"Page 36 - 'low level of passenger comfort' - it should be intolerable level of discomfort, and hazardous conditions to passengers and to transit systems. Last paragraph - 'projected capacity' - based on what is it projected? Money in hand? Equipment on order?

"Note: only a 7.38% increase in capacity, but under construction is 13.6% increase in demand, plus 9.4% increase based on approved projects, and total including those under formal review of 28% (p. 19). REVISE THIS SECTION." (Sue Hestor)

### Response

As shown in Table B, p. 278, Golden Gate Transit has a goal of no more than 10 standees. The EIR analysis does not assume that transit agencies



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would change their policies on standees or other aspects to accommodate new commercial development. The EIR only projects load factors that could occur if all development on the cumulative list occurs and occurs as proposed.

Present load factor policies are shown in Table C, p. 279. The number of riders in this table, both seated and standing, correspond to a load factor of "1.00" for all agencies. Muni, BART and AC Transit have occasional experience of "crush loading" conditions. Accommodating occasional crush loadings is not always possible by providing additional vehicles. Transit riders do not have perfect knowledge about the location, wait time and availability of capacity on transit vehicles, so they may board a full bus when a half empty bus is on route. Crush loading conditions are generally temporary, so that they may occur in the first or middle section of a route, but not at the end. More vehicles might alleviate conditions at these points, but would be unnecessary toward the end of the line.

The existing load factors shown in Tables 9 (p. 90) and D-4 (p. 418) of the EIR are averages showing typical conditions, which are within existing capacity. Table 9 shows existing load factors for all transit agencies serving the Bay area. Future load factors shown, as noted, are both with and without proposed capacity increases for the various systems. Policies on load factors are addressed by the transit agencies through proposed capacity increases. Use of the five-year plans in the transit analyses is a de facto assumption that the agencies will attempt to adhere to their service level policies. The EIR does not identify load factors above capacity for any transit system because of demand resulting from cumulative development, except for Muni (see Table D-4, p. 418). As the footnote to that table states, the load factors shown are based on existing capacity. Muni plans to increase capacity by 19%. How the increase affects the lines listed in Table D-4 would depend on how the increase is implemented.

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The EIR states, on p. 36, first full paragraph, "Loading in excess of a maximum load factor increases passenger loading time, reduces schedule adherence, and provides a low level of passenger comfort." Certain of the reported load factors would be infeasible, and are indications of demand without any capacity increases.

Projections of the Five-Year Plans of the various transit agencies are updated annually based on the current demand and financing information available. This then allows any reduction in potential financing to be reflected in proposals for increasing capacity. Thus, it is appropriate for the capacity increases contained in the plans to be incorporated into the transportation analyses in the EIR (Mary Tofanelli-Ujdur, Public Information Officer, Metropolitan Transportation Commission, telephone conversation, June 1, 1983).

The ability of AC Transit to provide service to downtown San Francisco would be affected by development in the Oakland Central District only to the extent that AC might divert vehicles currently used on the transbay lines for use on downtown Oakland lines, rather than increase its capacity to serve both areas. This is because the AC transbay routes are express and semi-express routes that link East Bay residential areas with the Transbay Terminal in downtown San Francisco rather than with the Oakland Central District. This EIR has not assumed any increase in AC Transit transbay service nor has it assumed any decrease.

The ability of BART to provide Transbay service is affected by development in the Oakland Central District as riders coming into Central Oakland from east of the Berkeley hills must use the same trains as San Francisco riders. (Riders on the Richmond and Fremont lines have service provided on routes which are separate from the San Francisco service.) Analysis of the cumulative peak-hour BART demand on the three BART lines serving downtown San Francisco, caused by Central Oakland development and from downtown San Francisco development, is shown in Table B, below. On p. 31, second paragraph, the EIR states, "... approximately 6.0 million sq. ft. of office space in nine new buildings are currently proposed for construction in the City of Oakland over the next 10 years."



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TABLE B: BART LOAD FACTORS, EXISTING AND PROJECTED

<u>Cordon Point</u>	<u>(1982) Existing Load Factor*</u>	<u>Existing + Cumulative Load Factor**</u>
Transbay from Embarcadero		
Concord - Daly City	0.88	0.83
Richmond - Daly City	0.88	0.82
Fremont - Daly City	0.93	0.87
Northbound from MacArthur		
Concord - Daly City	0.90	1.13
Richmond - Daly City	0.81	0.96
Southbound from Lake Merritt		
Fremont - Daly City	0.90	0.86

\* Load factor based on seated plus recommended standing capacity.

\*\* Load factor based upon projected seated plus recommended standing capacity from BART Five-Year Plan and on cumulative development in both San Francisco and Oakland.

SOURCE: Environmental Science Associates, Inc.

BART attempts to maintain a seated load factor of 1.30, i.e., 30% standees, but crush loading on a BART train is in the 1.70-2.00 seated load factor range. With the load factors projected above, BART plans for improvements to its system would enable BART to serve both the Central Oakland cumulative development and the downtown San Francisco cumulative development at the capacity levels projected for 1987.

As stated in Table 9, p. 90, in the first footnote, a load factor of 1.00 is equivalent to 100% of recommended seated and standing capacity for each transit agency. Recommended capacity differs for different types of vehicles and is defined differently by each transit agency. In all Bay Area transit systems, recommended capacity is less than actual physical capacity of transit vehicles ("crush loads"). Table C, following, shows how many standees are included in load factors of 1.00 on each transit agency's vehicles.

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TABLE C: NUMBER OF STANDEES INCLUDED IN LOAD FACTORS OF BAY AREA TRANSIT SYSTEMS

<u>Agency</u>	<u>Vehicle</u>	<u>Maximum Seats</u>	<u>Recommended Standeers</u>	<u>Recommended Total*</u>
Muni	Motor Coach (Average)	45	23	68
	Trolley Coach	50	25	75
	LRV	68	82	150
BART	All	72	36	108
AC Transit	Motor Coach (Average)	48	12	60
SamTrans	Motor Coach (Average)	47	12	59
Southern Pacific	Suburban Car	100	0	100
	Gallery Car	150	0	150
Golden Gate Transit	Motor Coach	45	10	55
	Sausalito Ferry	400	175	575
	Larkspur Ferry	510	240	750

\* "Recommended total" is equal to a load factor of 1.00 for all systems.

SOURCE: The information contained in this table is taken from the five-year plans of the transit agencies.

The transit analysis (and the transportation analysis as a whole) is based on existing travel distribution patterns, and the estimates do not include a change in the percent of transit use as a result of a parking deficit. Changes to the distribution as a result of cumulative development cannot be predicted accurately. The EIR acknowledges the potential increase in transit ridership on p. 96, last full paragraph, but quantification is not possible. Section 15140(h) of CEQA Guidelines states that, "If, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact." However, it can be stated that the number of commuters affected by the parking deficit would be approximately 15,500; the figure of 11,500 pertains to the demand for spaces, and as some rides are shared, non-drivers would also be affected.



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Travel modes by residence of employee are shown in Table D-3, p. 416, and vary by place of residence and transit services available. The percent of existing transit use attributable to downtown office development is not known; to develop an "existing" set of values, an estimate of the amount of existing transit use generated by the entire downtown area would have to be made. All of the "existing" data in Table 9 include non-downtown travel.

The existing load factors and ridership shown in Table D-4 were compiled by the DCP from Muni load checks. The load factors are an average of the three most recent schedule checks for each Muni route and represent the best available data.

The projected load factors (cited in Table D-4) of 1.68, 1.47, and 1.54, are based on 16.1 million sq. ft. of cumulative office development and 0.5 million sq. ft. of cumulative retail development and upon existing (1982) capacity.

Muni's motor coaches seat 45 persons and accommodate a recommended maximum of 23 standees, for a maximum recommended loading of 68 passengers. A loading of 1.68 on the 71 line would represent 114 persons, 46 more than the recommended maximum and a total of 69 standees. Such a loading is infeasible. People wishing to board motor coaches would have to wait or find alternate transportation. Muni has reported individual coach loadings as high as 1.34 times the recommended capacity, or about 90 persons on a motor coach.

The other projected load factors of 1.47 on the K, L, M, N, LRV lines and load factors such as 1.54 and 1.47 on coach or trolley lines are also regarded as infeasible. A factor of 1.47 on an LRV would mean about 70 riders over the recommended maximum loading of 68 seated and 82 standing passengers.

Table 9 also shows load factors based upon proposed capacity. Muni load factors for proposed capacity for the future conditions are 1.11 for both existing plus cumulative, and for existing plus cumulative plus the

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project. As the existing load factor on the downtown lines is 0.91, the net effect of cumulative development and proposed capacity increases would be to increase the average Muni load factor by 0.20 (to 1.11). This increase would be equivalent to an average of about 15 additional riders on each motor coach. The 1.11 factor is an average; specific projections by line are given in Table D-4, p. 418. An additional 0.11 load factor represents about 7 additional standees beyond the maximum recommended load (1.00) on an average Muni motor coach, which may be accommodated in a "crush load" condition.

The "projected capacity" referred to on p. 36 is from the Muni Five-Year Plan, Vol. 2, pp. 24-25. Muni has ordered 22 new LRV's and is scheduled to purchase 110 new motor coaches and 55 new articulated buses by 1985. Funds for the new vehicles have been secured from the City, but the effect they will have on the capacity of Muni service downtown is dependent upon the future availability of additional operating subsidies. If new operating funds are not secured, then some of the new vehicles would be used merely to retire existing vehicles. If adequate funds were obtained, a significant improvement in downtown peak-hour operating capacity would result. Muni's planning office is assessing the potential for improving downtown capacity with use of the new vehicles. The estimate given in Table 9 of a 22% increase in p.m. peak-hour outbound service downtown in the next five years is probable, although contingent upon availability of future operating funds (Susan Stryner and Anthony Bruzzone, Muni Planning Division, telephone conversations, April 19, 1983).

The interim plan of Caltrans District 04 for extension of the Peninsula train service to the Ferry Building is now being reviewed by the new administration in Sacramento. A decision on the proposal is expected in May, and the project could be implemented in a few months. The plan calls for three trains of six cars each to be used during the a.m. and p.m. commute hours. The total seated capacity of all three trains would be 2,700 persons.

The 7.38% increase in capacity referred to is the portion of Muni's total projected increase of 19% which, if annualized over the Five-Year Plan



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period, would occur by 1984, the year projected for project buildout. It cannot be compared to the percent of increase represented by full development of all buildings under construction, approved or proposed included on the list of cumulative development since not all of these developments would be completed by 1984, if at all.

### PEDESTRIANS

#### Comment

"Page 37 - pedestrians - relate street and sidewalk width to norm for area of similar density - this area is hazardous to pedestrians.

"Ignoring construction hazards from 25 Jessie St. - area is a mess for pedestrians. Also is extreme fire hazard since equipment can't easily get to buildings in interior.

"Pedestrian traffic to East Bay Terminal is much more heavy than that indicated in this discussion.

"The entire pedestrian discussion needs attention. Golden Gate puts surges of students on the alleys during the day and evening hours. Ecker St. is a major pedestrian thoroughfare, which is going to be even more congested when [Ecker Square] opens. Because the sidewalks are so tiny everyone walks in the street. With construction barriers for this project, it will be even more ridiculous.

"Page 3. What do we do once pedestrian intersections reach 100%? Does the 100% include all the buildings we have in the pipeline and approved?" (Susan Bierman)

#### Response

Sidewalk and street widths on the project block are given in the response on p. 195-196, under Land Use. The existing conditions for pedestrians on the project block are discussed on pp. 37-39. No pedestrian hazards have

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been identified. On the contrary, pedestrian levels of service are good.

Pedestrian volumes reported in the EIR are based on counts taken during the lunch and p.m. peak hours, those hours when pedestrian levels are highest on the project block. Without specific information to refute these counts, the comment cannot be evaluated against information provided in the report.

The presence of Golden Gate students is represented in the counts conducted on the project block. Ecker St., as stated in the EIR, p. 37, last paragraph, operates at 16% of capacity if the entire street width is used as the basis of calculation, and 37% of capacity if only the sidewalk is used. Since the street is closed to vehicular traffic along most of its width (although an occasional loading vehicle parks in the portion between Stevenson and Jessie Sts.), pedestrians generally use the entire street width. Construction of the Ecker Sq. building has resulted in varying levels of closure. The closure is partial and temporary. Construction of that project will be complete by the time construction and occupancy of the 71 Stevenson St. project would begin. The EIR discusses cumulative pedestrian impacts on pp. 92-93.

Vehicle and pedestrian traffic volumes on Stevenson and Jessie Sts. are low enough that conflicts are not indicated. Sidewalks on Stevenson St. are about 8 ft. wide, and if the south sidewalk were closed, the north sidewalk would have ample room for pedestrians. Jessie St. does not have sidewalks (as recognized by the Department of Public Works) fronting the site. The curbs there extend about 3-ft. from the buildings' walls and help prevent vehicles from striking them. If a portion of Jessie St. were closed during construction, pedestrian movements would not be hampered. Adequate room to allow the passage of loading vehicles on this street would be maintained. When construction of the project was completed, a 6-ft. wide sidewalk would be in place along Jessie St. at the site, as well as a plaza on Jessie St. at Anthony St., resulting in increased pedestrian space. The project would also allow mid-block passage from



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Jessie to Stevenson St. which does not exist at present, offering an alternative route to Ecker St. (Figure 41, p. 337, shows pedestrian routes which would be available upon the completion of the preferred alternative, Alternative E, and Lincoln Plaza.)

The project would contribute 3%-6% of total projected p.m. peak-hour pedestrian traffic at the First and Mission intersection. The EIR states, on p. 93, last paragraph, that, "The project alone would not noticeably affect the operation of the crosswalks at the Mission/First intersection, but the cumulative effect of downtown development would be to increase pedestrian traffic in the crosswalks across Mission St. to about 100% of capacity, from 65% of capacity." The projection includes all development listed in Table A-2, p. 328 of the Draft EIR.

### TRAFFIC

#### Comment

"Some of the project-generated traffic will increase existing AM and PM peak period congestion on State routes approaching and within San Francisco.

"This EIR should discuss the impacts of possible freeway removal on this project, especially at the Main and Beale St. ramps. One of the projects in the I-280 Transfer Concept Program (a DEIS is currently being prepared) is the removal of the Embarcadero Freeway north of Beale Street." (Darnell Reynolds)

#### Response

The effect of project-generated traffic on approaches to freeways near the project site is discussed on pp. 94-95 and in Table 10. The effects of project and cumulative vehicular traffic are discussed on pp. 87-89. See also the response on p. 268, under the heading Cumulative Development Impacts.

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It would be premature to attempt to predict the effects of removal of the Embarcadero Freeway as it relates to project impacts. Not only would the freeway be removed, but other roadway changes would be expected to accompany the removal. These changes cannot be anticipated at this time. Presumably, the Environmental Impact Statement on the I-280 Transfer Concept will incorporate information concerning developments in San Francisco that could be affected by the program under consideration.

### PARKING

#### Comment

"Page 3. Who uses the parking garage? Does the Palace use it? If the Palace uses this and the garage at 90 New Montgomery, where will they park their cars? Will the staff please ask the Palace regarding that. We must be careful that the Palace doesn't fold, as the hotel has the Landmark Garden Court in it." (Susan Bierman)

"I would like to know the type of parking which is presently being utilized in the 300-space garage. What are we losing? Long-term parking, short-term parking or a combination thereof? Because of the fact we are creating demand by this for 610 spaces, is, to me, quite a loss in parking in the downtown area.

"I'd also like to know, on the next page, page 96, where it says that the project would represent approximately two percent of the total demand. Compared to the other buildings, is that a lot or is not? I don't have anything to relate that to." (Norman Karasick)

"Page 96 -Is there such a thing as average garage occupancy? I believe statement that 4,100 spaces are available on a daily basis is misleading. These spaces (4,100) available during what hours? Is it true for peak 8-5 hours or evenings only? Please clarify." (Yoshio Nakashima)



"Page 41 - 90 New Montgomery and 315 Howard are already approved." (Sue Hestor)

Response

An estimated 80% of guests with vehicles at the Sheraton Palace use the Palace and Hearst garages, located in the block west of the project block (Van Woodworth, Resident Manager, Sheraton Palace Hotel, telephone conversation, April 20, 1983). Removal of the garage on the project site would thus not be expected to affect Hotel operations.

The site garage contains three floors. The basement, with 77 spaces, is totally and separately leased to the Federal General Services Administration and is not available to the public.

The ground floor has 73 striped spaces, and the top floor has 125. The garage has attendant parking, and by using aisles, the garage can accommodate 275 autos.

The reduction of long-term parking facilities in downtown San Francisco is consistent with policies of Transportation Element.

To determine the percent of long-term vs. short-term use on the site, use of the garage during workdays in January 1983 was analyzed (Jon Twichell Associates, April 8, 1983, Parking Survey and Analysis, 71 Stevenson Street). (See following paragraphs for further details.) Monthly paid parking accounted for 98 spaces, and 139 spaces were occupied for four or more hours, for a total of 237 long-term space occupancy (daily long-term, exclusive of monthly spaces, varied from 117 to 160). On the basis of a (conservative) assumption that all 275 spaces were available at all times, the remaining total of 38 short-term spaces (14% of the total 275 spaces) are available on a daily basis. These spaces were used by a daily average of 90 short-term parkers. On the assumption that each short-term trip averages two hours over an eight-hour day, there is an average of 22.5 short-term vehicles parked at any one time.

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Because the 71 Stevenson project involves loss of an existing parking garage and because of concerns the City and public have over the loss of downtown parking facilities, an in-depth parking analysis has been conducted for the project (Jon Twichell/Associates, April 8, 1983, Parking Survey and Analysis, 71 Stevenson Street). The report is available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., 5th Floor.

As noted above, the garage currently provides 38 short-term spaces for an average of 22.5 short-term parkers at any one time, a total of 90 parkers on an average day. The 38 spaces represent about 14% of available spaces in the garage. (Parking in the basement, which is not available to the public, is not included in this analysis.) All short-term parkers leaving the garage between 9 a.m. and 6 p.m. on March 31, 1983, were interviewed as to length of stay and reason for making the trip. A total of 95 persons were interviewed. Their responses are shown in Table D. The results of the survey indicate the majority of trips were business-related.

The project would have a short-term parking demand for 30 spaces. To meet existing and future demand on the site, then, the project would need to supply 68 short-term spaces (38 + 30). The project would provide 34 spaces.

In response to concerns about parking, among other issues, the sponsor has introduced Alternative E, Design Alternative. This alternative would contain 75 spaces, 68 of which would be designated for short-term use. Alternative E is described on p. 329.

For a comparison of the project's demand to that from other proposals, the amount of floor area for each development can be compared, since parking demand is roughly equivalent to the amount of office space proposed. The proposed floor areas of developments approved, proposed and under construction in the downtown are shown in Table A, pp. 222-224.



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TABLE D: PARKING SURVEY RESULTS, 71 STEVENSON ST. GARAGE

<u>Length of Stay</u>	<u>Number</u>	<u>Percent of Total</u>	<u>Reason</u>	<u>Number</u>	<u>Percent of Total</u>
Less than 1 hour	20	21%	Business	87	92%
1 - 2 hours	51	54%	Shopping	4	4%
2 - 3 hours	14	15%	Recreation	4	4%
3 - 4 hours	<u>10</u>	<u>10%</u>			
Total	95	100%		95	100%

SOURCE: Jon Twichell/Associates, survey conducted March 31, 1983

The garage occupancy discussed in the text actually refers to peak occupancy during working hours. The peak occupancy of each garage or lot is estimated by interviews with managers or by inspection, and a total is computed for the downtown area. A second total is computed of the total number of parking spaces in the same garages or lots. The difference between the number of spaces and peak occupancy is the number of spaces vacant and available for parking during periods of peak demand. The peak parking demand period is late morning or early afternoon.

The last two sentences of the first full paragraph on p. 41 have been deleted and replaced with the following:

"Of these 12,500 spaces, 700 are located on lots that would be removed by projects either approved or under review: 90 New Montgomery, 70 spaces; 315 Howard, 20 spaces; 388 Market, 40 spaces; and 333 Bush, 360 spaces. Fifteen lots, containing 1,350 temporary spaces, are on sites within the Yerba Buena Center Redevelopment Area, which is scheduled for full completion in 1988. The Yerba Buena Center Redevelopment Plan could potentially provide approximately 5,200 off-street parking spaces (YBC Final Second EIR Supplement, certified January 4, 1983)."

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### CEQA REQUIREMENTS AND COMPREHENSIVE PLAN POLICIES REGARDING PARKING

#### Comment

"Just because something is City Policy doesn't immunize it under CEQA from having to be dealt with. Explain environmental impact of removing short-term parking from downtown core area." (Sue Hestor)

"Section 15142 and 15143 of CEQA contains two separate and distinct requirements for an EIR in terms of environmental impact analyses. The primary requirement of CEQA is contained in Section 15143 which requires an EIR to describe both the significant environmental effects of a proposed project and mitigation measures to minimize the significant effects. Section 15142, on the other hand, requires the EIR to discuss any inconsistencies between the proposed project and applicable general plans and regional plans.

"It should be clear that a discussion of whether a proposed project is or is not consistent with a general plan (Section 15142) in no way relieves the lead agency or project sponsor from complying with the CEQA requirement to mitigate adverse impacts associated with projects (Section 15143). For instance, if a city had a general plan which encouraged dirty air, water pollution and traffic congestion as a matter of policy, this does not mean that the City is therefore free of CEQA policies which mandate that significant adverse environmental effects of proposed projects are mitigated. Just because a project may be consistent with the City's policies does not mean that CEQA requirements for mitigation are not required.

"However, in regard to parking in San Francisco, the Commission is not requiring parking mitigation for individual commercial development projects because the City is intentionally creating a parking problem. Just because project EIRs faithfully discuss that providing no parking is consistent with City policy (Section 15142 of CEQA) does not alleviate the requirement of CEQA to mitigate the significant adverse impacts associated with the project (Section 15143). Recent individual project EIRS have noted that there is a "parking space deficit" of tens of thousands of spaces as a result of cumulative commercial development in the downtown area. The problem is then



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dismissed because it is fostered by and consistent with City Policy. Section 15143 requires a discussion of this problem and its mitigation.

"The inability to use private transportation to get to work or to a retail store because there is no place to park will be a direct result of the construction of approved and proposed development projects. The City right now has citizens up in arms about parking fines because they feel they are unable to park near their destinations. What are these people, who have accomplished a rollback of parking fines, to think when they discover there will be a 11,500 parking space deficit. The parking problem in San Francisco is intense and the cumulative impacts of this and other buildings on the parking problem is clearly an adverse environmental impact.

"Richard Sklar of the P.U.C., has indicated that MUNI will be unable to expand fast enough to meet additional demands. AC Transit has laid off bus drivers because it lacks funds to operate the busses it has. Bay area transit systems will not be able to sustain the load carried by San Francisco's no parking space policies.

"This Commission has never, however, made a finding that there is a parking problem in its resolutions of commercial development project EIRs. I presume it is because it is city policy not to mitigate parking problems in the central business area.

"CEQA requires a finding of significant impact when they occur, and mitigation of those impacts. Just because a city encourages a problem as a matter of policy does not mean CEQA requirements disappear.

"The Commission should make findings of adverse parking impacts associated with the specific project and with cumulative development.

"A discussion [must be included in the EIR] of the project specific and cumulative downtown development impact on parking.

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"A discussion [must be included in the EIR] of measures to mitigate any adverse parking impacts associated with the individual project or cumulative development.

"If the project and cumulative parking impact analyses indicated a net demand for parking spaces which will not be fulfilled, a discussion [must be included in the EIR] of how new workers who cannot find parking in the downtown area will get to work. Will they park in San Francisco's neighborhoods and take Muni, or will they take other transit systems? If so, is this additional land or transit systems assumed in the transit analyses?

"Parking problems associated with this project and cumulative development have not been mitigated. CEQA requires mitigation of adverse impacts. However, the Commission approval resolution does not require parking mitigation because the City's Master Plan encourages the creation of a parking problem. Although creating a parking problem is consistent with City Policy, it is no excuse to disregard CEQA requirements. Therefore, the Commission should not approve this project without parking mitigation." (David Jones)

### Response

A discussion of project and cumulative development impacts on parking is included in the EIR on pp. 95-97. The parking deficit is listed on p. 126 as a significant environmental effect that cannot be avoided if the project is implemented. See also the discussion in the preceding response. The sponsor has introduced a revised proposal, Alternative E, that would provide short-term parking equal to the existing and project-related demand. See p. 329 for a description of the Alternative.

The deficit of available parking in the downtown is consistent with Comprehensive Plan policies (as well as proposals in Guiding Downtown Development). The Comprehensive Plan and GDD envision provision of parking in outlying districts, with the use of shuttles and transit to bring people into the downtown area. The Department of City Planning has identified areas appropriate for parking (largely under freeway overpasses



in the south of Market, and also to the west of Van Ness Ave.). An overall parking deficit is consistent with Comprehensive Plan policies to encourage the use of transit and carpooling to reduce congestion on streets, freeways and bridges. If downtown office buildings included large amounts of parking in an effort to meet some portion of the demand, the resulting traffic congestion downtown would be precisely the effect Comprehensive Plan policies seek to avoid. For this reason, mitigation measures imposed by the City Planning Commission have, in the past, emphasized the maintenance and expansion of transit rather than provision of on-site parking. For the project specifically, not providing long-term parking would reduce peak-hour trips through the First and Mission intersection.

#### TRANSPORTATION MITIGATION MEASURES

##### Comment

"Why is there no consultation with other regional transit agencies about mitigation for their capacity? Have they been consulted? When? With what results? Why not? AC Transit is having problems.

"Please explain what impact each measure is mitigating, how and why it is a mitigation, rather than merely a condition of development (i.e., things required as part of privilege of building anyway)." (Sue Hestor)

"The Draft EIR provides insufficient measures to mitigate transportation impacts. Downtown office development will have significant effects on traffic and mass transit systems. An analysis of the cumulative impacts of buildings which are, or have been formally under review, discloses substantial transportation-associated degradation.

"Traffic in nearby intersections will deteriorate. These levels have been defined by the San Francisco Department of Public Works as follows:

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"Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.

"Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can be generally described as very good.

"Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.

"The only mitigation measures proposed to reduce or eliminate the increasing downtown vehicular congestion are encouragement of flex-time, construction of a bicycle parking area, and provision of a transportation broker to encourage the use of mass transit. The first measure will be able to accomplish very little, since peak hours of congestion cover a broad time range and flex-time will be ineffective in avoiding commuting during this peak time. The latter measure, provision of a transportation broker, is positive in substance, but it is questionable whether the mass system will be able to absorb this increasing ridership." (San Franciscans for Reasonable Growth)

### Response

The regional transit agencies were consulted during the preparation of the EIR and the information obtained is reflected in the analysis contained in the EIR. As shown in Table 9, p. 90, and stated on p. 92, the proposed capacities would be adequate for the increased level of demand for all of the agencies proposing capacity increases. AC Transit is not proposing any capacity increases. MTC, as the regional administrator of UMTA and State TDA funds, will not allocate funds for AC to expand transbay



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services as the AC service is in direct competition with BART. A change in regional policy would be necessary to make feasible a mitigation measure that would increase AC Transit transbay capacity. Southern Pacific is now proposing to increase capacity about 22% through replacement and rehabilitation of existing rolling stock over the next five years. At the end of the five-year cycle (1987), capacity would be 8,040 riders. With the additional capacity, with and without the project, SP's load factor would be 0.91. The travel demand projections have assumed that the existing percentage of commuters using SP would remain constant, which may be overstating the amount of future SP ridership based upon past trends (ridership has been declining over the last 10 years). CalTrans, Muni, SamTrans and Santa Clara County transit have assumed the considerable SP operating deficit in hopes of revitalizing the peninsula rail commute.

Table 9, p. 90, has been revised to reflect the proposed expansion of SP capacity. The load factors of "1.10" in the last two columns of the table (sixth line) have been changed to "0.91". The words "Southern Pacific" have been deleted from the second sentence of the second full paragraph on p. 91 of the DEIR. The following has been added as the third sentence of that paragraph:

"Southern Pacific/CalTrans would not operate in excess of its recommended maximum capacity under the existing-plus-cumulative conditions as well as after addition of the project demand."

The seventh full sentence of the first paragraph on p. 92 of the DEIR has been revised to read as follows:

"Southern Pacific/CalTrans is proposing to increase seating capacity by 22%. Station improvements, including additional parking, are proposed."

None of the mitigation measures contained in the EIR is required by law; those required would be imposed at the discretion of the City Planning Commission. Because of the level of accuracy contained in the analysis of

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impacts (that is, several assumptions are made which may or may not be entirely representative), it is not possible to quantify effects of mitigation measures on these impacts. In addition, the nature of some of the mitigation measures is such that the level of mitigation cannot be quantified and the State CEQA Guidelines do not require that mitigation measures be quantified. The Guidelines, Section 15140(h), state that: "If, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact."

The EIR lists transit, traffic and pedestrian impacts related to cumulative development as unavoidable significant effects that cannot be avoided (see p. 126, third paragraph).

The traffic mitigation measures suggested by the EIR (pp. 119-120) and those in Resolution No. 9357 for the 135 Main St. project are all Transportation Systems Management (TSM) measures. The TSM measures identified are aimed at reducing peak-hour vehicle volumes by encouraging other modes of travel (such as mass transit as opposed to single-occupant autos), greater vehicle occupancies, and travel at periods other than peak periods.

The effectiveness of the TSM incentive measures (providing bicycle facilities, vanpool/carpool information) depends upon the perceived convenience of each of these modes to each commuter from day to day. Perceived convenience includes factors such as cost, schedule flexibility, travel times and the proximity of the travel route end points to origins and destinations. Choices can vary greatly from traveler to traveler and from place to place; accurate regional projections of the effectiveness of increasing the attractiveness of some of these choices cannot be reliably made.

While flex-time would not contribute to a reduction in the number of vehicle trips to downtown San Francisco, it would spread these trips out over a longer period of time. Spreading the peak allows greater utilization of the capacity of the existing street and freeway system.



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Although peak-hour periods would be expanded, the levels of service on city streets and on freeways would be improved from the projected conditions.

An employer's ability to implement staggered shifts or flextime depends on the size and nature of the firm. For example, small firms or service-sector firms would have less schedule flexibility than large firms or production-sector firms. For these reasons, any attempt to quantify the effectiveness of proposed TSM measures in removing vehicles from streets (and thus improving air quality) would be highly speculative and could be misleading. As noted earlier, the State CEQA Guidelines, Section 15140(h), state that: "If, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact."

The survey of employee travel patterns and drop-off and pick-up points would be used by the Department of City Planning staff to supplement existing information that the Department uses in planning and decision-making processes. This survey, proposed as a mitigation measure, could be used by the Department of City Planning and other concerned City departments (i.e., Public Works and Muni) to determine priorities for street improvements, bus routes and other transit-related improvements. CalTrans and downtown office project developers may also be interested in van and carpool information for use in transportation planning and project parking area allocation, respectively.

The role of the transportation broker is to make information on alternative commute modes available and easily accessible. The effectiveness of a transportation broker would be constrained by the physical limits of the transportation system in that a broker could not force individual commuters onto transit lines in excess of capacity. However, within the overall population of single-occupant auto commuters is a sub-group of commuters that would use a higher-occupancy mode if they were made aware of the availability of alternative modes, or if the difficulty of trying to arrange alternative modes were to decrease. The

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effect of a transportation broker has not been included in the transportation analysis. Thus, any increase in carpool, vanpool, bicycle, or transit uses effected by the transportation broker would reduce traffic and air quality effects as reported in the EIR.

Alternative E, now being proposed as the applicant's preferred alternative (see p. 329), would provide mitigation of the loss of existing short-term parking on the site and would provide additional short-term spaces to meet the project-related demand.

Other mitigation measures contained in the report not related to transportation are discussed below.

The mitigation measure under Urban Design on p. 118 would provide pedestrian amenities, in terms of both improving circulation and providing visual interest. See also the discussion of the applicant's preferred alternative on p. 329 for further pedestrian amenities which would be included in that design.

The measures under the heading "Cultural" on pp. 118-119 would promote the preservation or recovery of archaeological/historic artifacts should any be discovered during excavation for the project, and result in a photographic record of rated site buildings.

The mitigation measure under Housing on p. 119 would provide for the provision of housing in conformance to OHPP Guidelines.

The four mitigation measures listed under Air Quality on pp. 120-121 would help to lessen air pollution caused by construction of the proposed project.

The three mitigation measures listed under Construction Noise on p. 121 would help to minimize noise created by construction of the project by requiring the project contractor to muffle and shield tools, use electric-powered equipment instead of diesel-powered equipment, predrill pile holes where feasible, and limit the hours of piledriving.



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The four mitigation measures listed under Energy on p. 122 would commit the project sponsor to include energy-saving features in the design of the project, which would reduce the demand from the project on electricity and natural gas.

The six measures under Geology, Seismology and Hydrology on pp. 123-124 are means of reducing potential geologic and seismic hazards and hydrologic impacts during construction and life of the building.

The two mitigation measures under Emergency Response Plan on p. 125 would provide coordination between the project sponsor and the City's Office of Emergency Services in the planning of action programs to be carried out in emergency situations.

The mitigation measure listed as the first paragraph under Utilities and Public Services on p. 125 would commit the sponsor to include as part of the project the use of internal security personnel, alarm systems and maintaining well-lit entries in order to reduce demand on police protection services.

The mitigation measure listed as the last paragraph on p. 124 would ensure that building occupants had access to emergency response procedures.

### F. AIR QUALITY

#### AIR QUALITY EFFECTS OF CUMULATIVE DEVELOPMENT

##### Comment

"In light of the information in [the MTC/BCDC] study, which does not include cumulative development in San Francisco, it is clear that secondary source data would indicate major air quality problems in the Bay Area, which would be exacerbated by increases in commuters into San Francisco." (Sue Hestor)

RESPONSE

As noted in the response on p. 268, under the subheading "Impacts of Cumulative Development" in the Transportation section, the MTC/BCDC report states that only 20% of the development would use the 101 freeway north of Millbrae and, after accounting for transit use, the volume is about 9,000 peak hour vehicle trip ends. The analysis of regional air quality impacts contained in the EIR is based on information contained in the 1982 Bay Area Air Quality Plan, prepared by the Association of Bay Area Governments (ABAG), MTC and the Bay Area Air Quality Management District. The Plan projects regional population, employment and land use trends. Despite projected regional increases in population, vehicle use and the density of development in urban areas, attainment of state and federal carbon monoxide and ozone standards is forecast for 1987, now that a motor vehicle inspection and maintenance program has been adopted by the State legislature. The projected regional air quality impacts include development in San Mateo County. See Table 11, p. 99 for estimates of project and cumulative development impact on regional air quality.

AIR QUALITY MITIGATION

Comment

"The draft EIR does not discuss sufficient mitigation of project-related air pollution. The nine-county San Francisco Bay Area Air Basin is designated by the California Air Resources Board as a non-attainment area for ozone, carbon monoxide and total suspended particulates (TSP).

"As the EIR notes, implementation of the project would add to local and regional accumulations of hydro-carbons, nitrogen oxides, carbon monoxide, particulates and sulfur oxides. Ninety-five percent of these emissions would be transportation related, while five percent would be associated with space and water-heating requirements.



"In analyzing projected 1987 emission concentrations, the draft EIR relies upon prospective auto-emission control measures; even with implementation of these measures, project-related emissions would impede the attainment of standards for hydrocarbons, carbon monoxide, and particulates. Historically, however, emission control standards have rarely, if ever, been implemented as scheduled. Generally, compliance with standards has been postponed in response to industry lobbying, or standards have been weakened." (San Franciscans for Reasonable Growth)

Response

The emission projections contained in this EIR are not based on the assumption that additional emission control measures will be imposed in the future. California laws controlling emissions from new vehicles are not expected to change between now and 1987. The trend in emissions shown in the EIR reflects the effects of local and regional changes in the number, age and type of vehicles, not the effect of new emission control measures. If present controls on vehicular emissions are made less stringent in the future, local and regional air quality will be degraded.

G. ENERGY

Comment

"The energy analysis of the project is extremely sketchy albeit the disclaimer that aspects of the energy system are 'not yet resolved.' Unfortunately the estimated total annual energy requirements are more than double (254,000 Btu/sq. ft./yr.) the maximum allowable under Title 24 for buildings of this type and occupancy (126,000 Btu/sq. ft./yr.). Despite the weak analysis and the statement that the project could comply with Title 24 of the California Administrative Code, it is inconceivable that this could be achieved unless serious attention is given to energy use in the design of this project.

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"It would be pointless to detail the data needed to assure the Planning Commission that the project is energy efficient and that the building systems proposed have incorporated such measures that will assure wise use of our natural resources. Unless efficient energy use is incorporated into this project and an analysis prepared which reflects concern and interest in energy management we would recommend that no permits be issued for construction."  
(Robin Calhoun)

"The Draft EIR does not provide a basis for failure to implement alternative energy sources. When completed, the proposed project will consume about 7.6 million kilowatt hours (KWH) of electricity and 5.7 million cubic ft. of natural gas per year. Cumulative increases in energy consumption in downtown San Francisco will increase electrical consumption by 260 million KWH and natural gas consumption by more than 403 million cubic ft. It is axiomatic that reduction of energy usage and lessening of dependency on conventional sources are integral components of our national energy strategy. Nonetheless, the Draft EIR summarily dismisses incorporation of solar or other renewable energy sources into the project. The Draft EIR does not adequately address the cost/benefit analysis which resulted in a decision to utilize conventional energy sources rather than solar or other renewable energy systems." (San Franciscans for Reasonable Growth)

### Response

The energy analysis in the EIR is based on energy use projected for other buildings in the downtown, and thus energy consumption as projected would be similar to that of those other buildings. The EIR states, last paragraph on p. 106 and continuing on p. 109, "Several aspects of the project's energy system are not yet resolved, so a comparison of the project's energy budget with the building performance standards set by Title 24 of the California Administrative Code may be premature./6/ The project would comply with the requirements of Title 24 by meeting prescriptive standards for insulation, weather stripping, glazing area, mechanical equipment efficiency, and other energy conservation measures; or by meeting the performance standard./7/"



## VIII. Summary of Comments and Responses

Note /7/ states, "Compliance with the Title 24 prescriptive standards is achieved by constructing the project in accordance with certain physical specifications such as for weatherstripping on doors and windows, and installing appliances and equipment that meet energy efficiency standards. Compliance with the performance standard is achieved by demonstrating that the building's annual energy consumption would not exceed the allowable annual energy budget specified by the California Energy Commission; the energy budget takes into consideration the mix of uses proposed, and is expressed in Btu per sq. ft. of conditioned floor area. Projects that meet the performance standard need not meet the prescriptive standard." The project could thus comply with Title 24.

In response to concerns, among others, about efficient energy use in the new building, the sponsor has introduced Alternative E, Design Alternative, which would meet the performance standard of Title 24. See p. 383 for the discussion of energy consumption by this alternative.

The project sponsor has not rejected the use of solar energy. The EIR states, on p. 22, that the use of an active solar water heating system is under consideration.

### H. HAZARDS

#### Comment

"Page 43 - discussion on seismology insufficient. Refer to Community Safety element. This is area of potential ground failure. Objective 1, Life Safety, Policy 5 - this area should not have such dense development. What is the acceptable level of risk on a block with a university? Is it policy to make the development even denser so someone else can get richer? Explain the public policy behind that. Also Policy 1 - explain how this project meets that policy. Explain the tradeoff between the social cost of putting so many people at risk of life and limb in an earthquake and the economic benefit flowing from approving the project on an interior lot of such an already dense

## VIII. Summary of Comments and Responses

block. Describe how this project and other cumulative development affect the ability of the city to evacuate out of city residents in an earthquake or serve in the city those residents if they are stranded here. Explain the state of the City's emergency planning to deal with a major disaster. How realistic is that planning? What if the bridges collapse or are not able to function until an extensive inspection is performed? How will all of those people get home? These comments also relevant to page 110. Please explain seismic hazard in human terms of death and injury and effects on real people.

"The one thing that is particularly important about this project, it's on the interior block, and you have streets that are barely walkable. There is going to be enormous fire hazard and enormous seismic safety problems with this site. And that is what I will put in my written comments. I would ask those of you who indulge me, please read them, because this is not the normal situation where you are on two broad streets. You are in a dangerous site, and there is a university right next door. I went there for three years. And people walk in those alleys. It is a really hazardous situation there. I think it is stupid City policy to encourage that kind of intense development in the middle of a block.

"My figures on the amount of cumulative development are now 55 million sq. ft. of under construction, approved or proposed commercial development. Please tell what the impacts of that amount of development will be - especially on the ability to move people into, around and out of San Francisco. What complications will arise in a major disaster during the daytime when all of the commuters are here? Can San Francisco move them out, accommodate them, what is our disaster plan for dealing with so many people?" (Sue Hestor)

"I'd also like to look into the fact of a building of this density and this height in this particular area, what impacts that would have on traffic and emergencies into this specific area -- not at the intersections, but for access to this very building itself . . . for fire, for ambulance, for services of that nature -- not necessarily a catastrophe, but just for those which we might normally expect to occur." (Norman Karasick)



Response

The EIR states, on p. 44, that the site is subject to liquefaction potential and subsidence hazard. No specific density vs. seismic safety guidelines or policies exist. Seismic resistance standards are defined by the Building Code, and the project would conform to these standards. Specific City policy regarding density on this block is expressed solely in the Planning Code: 14:1 FAR, 700 ft. maximum height. Guiding Downtown Development, June 1982, assigns the site a 12:1 FAR and a 700 ft. maximum height limit.

Risk levels are defined by the Community Safety Element of the Comprehensive Plan for different types of land uses and building densities. The project would fall under Risk Level 2:

- "No structural collapse or mechanical failure should occur that could cause loss of life.
- Mechanical systems may fail to operate but failure of mechanical or architectural elements such as light fixtures, pipes or ducts, suspended ceilings, or elevators should not cause loss of life.
- Failure of mechanical systems should be limited to that which can be quickly repaired with minimal outside assistance.
- Damage may occur to interior or exterior finishes or to contents of structures.
- No damage that would preclude rapid restoration to operational capability should occur.
- Applies generally to structures of medium-to-high density occupancy and structures whose use following a disaster might be desirable but not critical: large stores, theatres and other places of public assembly; office buildings; large apartment buildings or complexes; large hotels; police stations; schools; jails and detention centers;

## VIII. Summary of Comments and Responses

dormitories; and convalescent hospitals" (pp. 13 and 14).

Golden Gate University has the same Risk Level classification as the project. Note that Risk Levels are based on densities, but do not define allowable densities.

A description of the City's emergency response program and potential effects follows later in this response.

The interior streets on the project block are not now and are not projected to be barely walkable. See the response on p. 282, under the heading Pedestrians. A portion of Ecker St. has been temporarily narrowed to accommodate construction of the Ecker Sq. building. Upon completion, a width of 20 ft. will be available for pedestrians. Further, the project would create an additional pedestrian passage through the block from Stevenson to Jessie Sts. that does not now exist. The project would be designed in conformity with seismic safety standards of the San Francisco Building Code. It would be designed not to collapse in a major earthquake so that building material would not be likely to block evacuation routes on the project block.

For a discussion of fire department access, see the response on p. 264, under the heading Costs to the Fire Department. Also see the discussion of Alternative E, Design Alternative, p. 384. This alternative incorporates an evacuation/access system that has been reviewed and approved by the Fire Department.

The California Division of Mines and Geology (CDMG) has recently published a scenario of potential damage to lifeline services, including transportation routes, utilities, marine facilities and airports from a magnitude 8.3 earthquake on the northern portion of the San Andreas Fault (Davis, James F., John H. Bennett, Glenn A. Borchardt, et al., Earthquake Planning Scenario for a Magnitude 8.3 Earthquake on the San Andreas Fault in the San Francisco Bay Area, California Department of Conservation, Division of Mines and Geology, Special Publication 61, 1982). The study details damage to specific freeways, bridges, train routes, electricity



## VIII. Summary of Comments and Responses

and gas lines, water lines, airports and marine facilities, and makes conclusions about how long each specific "lifeline" link would be unusable. With regard to evacuating San Francisco, the study states that in the event of a major earthquake "... vehicular traffic into and out of the City of San Francisco and much of San Mateo County would be impossible for many hours until one or more corridors become available. Use of the Golden Gate, San Francisco - Oakland Bay, Richmond - San Rafael, and San Mateo bridges will be impossible for an extended period" (24 to over 72 hours). Even with corridors available for evacuation, a quick and smooth evacuation of San Francisco would be unlikely, because of the City's dense population, and geographic location at the end of a peninsula, which severely limits access to and egress from the City.

The CDMG study put forth a number of "planning insights" and recommendations for further study to aid local planners in developing emergency response plans for a major earthquake. The effectiveness of these plans depends, in part, upon the degree to which the various municipalities follow the State's recommendations in planning for such an event. It should be noted that San Francisco is severely limited in its ability to respond to a major earthquake by physical characteristics (i.e., being linked to other areas by bridges) that are not possible for planners to control or change.

This study does not specifically address damage to buildings, and does not address problems in specific areas of San Francisco. San Francisco has an emergency response plan, specifically addressing the needs of the City, on file at the City libraries. This plan identifies roles and responsibilities of government agencies that would be involved in the event of a City emergency. It includes listings of casualty and mass care centers that have been established on a district basis to provide first aid and essential social services to injured and displaced persons. This listing is updated periodically (Tom Jenkin, Architect, Mayor's Office of Emergency Services, telephone conversation, October 18, 1982). Evacuation plans have been developed for many downtown office buildings; such a plan would be developed for this structure.

## VIII. Summary of Comments and Responses

Cumulative highrise development proposed for the downtown area would increase the total number of persons working downtown. This would result in a greater demand for medical and social services in the area if a disaster were to occur. In addition, street congestion would probably intensify because of the increased number of people concentrated in the Financial District. This would add to the difficulty of prompt response of emergency vehicles because of route delays and detours caused by crowded and blocked streets.

The effectiveness of the City's emergency response plan would depend, in part, on an informed public's knowledge of what to do and where to go in the event of an emergency. The project sponsor has agreed to a mitigation measure which addresses this impact (see p. 125, first two paragraphs).

### EARTHQUAKE FREQUENCY

#### Comment

"Page 44 - where did you get the idea that we have 60 years until the next major earthquake?" (Sue Hestor)

#### Response

The EIR states, on p. 44, first full paragraph, that "Earthquakes can be expected ... [w]ithin the next 60 to 170 years...." This means that an earthquake with a Richter magnitude of 7 - 8+ can be expected every 60 - 170 years. It has been 77 years since the last earthquake of this magnitude on this part of the San Andreas Fault (1906, San Francisco); on the basis of historic recurrence intervals, as documented in the report, Seismic History of the San Francisco Region, Don Tocher, California Division of Mines, 1959, an earthquake of this magnitude can be expected anytime within the next 95 years.



I. ALTERNATIVES

NO-PROJECT ALTERNATIVE

Comment

"Page 127 - Should state more positive benefit of a no project alternative."  
(Yoshio Nakashima)

"No Project Alternative - what return does developer seek? Detail the environmental effects that would be avoided if this and other cumulative development was not added.

"CEQA requires an objective analysis of no project alternative. Given the huge impacts of cumulative development, and the role of this project in that impact, the environmental advantages of not allowing this project, and other such similar projects, until the City and region can get a handle on how to provide the housing, transit, roadways, etc., to meet that demand and minimize those impacts, would seem to be considerable. Please explain the cumulative benefits to the environment of not incurring those environmental harms. This is also a comment on Alternative 1-C. Project sponsor does not have the right to throw away the City's rights to delay this and similar projects until we are able to cope with the effects and the City is able to systematically and rationally absorb the amount of office space without having a glut on the market." (Sue Hestor)

Response

The purpose of the environmental review process is to present issues in an objective manner. The impacts of the No Project Alternative are presented on p. 127, paragraphs 1-3. The third paragraph has been revised to read as follows:

"The effects identified in Section IV, Environmental Impacts, of this report, including increased employment, new housing demand, creation of additional revenues to the City and creation of an increased

## VIII. Summary of Comments and Responses

subsidy for Muni, increases in vehicle and pedestrian traffic, transit ridership and parking demand, construction noise impacts and increased energy use would not occur. In addition, increased shadows attributable to the project, shown in Figures 18-29, would not occur. Further, 300 spaces of off-street parking would not be lost."

The return sought by the developer is not information that is required for or relevant to the evaluation of environmental impacts of the project.

While the EIR provides the sponsor's reasons for rejecting alternatives, the City is not precluded from approving an alternative instead of the project in spite of its being rejected by the sponsor.

### GUIDING DOWNTOWN DEVELOPMENT ALTERNATIVE

#### Comment

"Page 129, next to the last paragraph, says, 'The width and length of shadows would be slightly reduced,' then 'The length of the shadows would be the same.' Which is correct? It just kind of contradicts itself." (Susan Bierman)

"The Draft EIR does not adequately explain why the proposed project does not comply with Guiding Downtown Development (GDD). In May 1981, the Department of City Planning published ... GDD which contains regulatory proposals for downtown San Francisco development. Although the City Planning Commission has not voted on adoption of the GDD, the document contains important policy guidelines -- so important that the Planning Commission requires that EIRs for developments in the downtown area must include an alternative complying with the GDD. The proposed project substantially is at variance with the GDD. The EIR does not adequately explain why the alternative proposal, which conforms with the GDD, was rejected." (San Franciscans for Reasonable Growth)

#### Response

The shadows generated by this alternative would be shorter than those from



## VIII. Summary of Comments and Responses

the project, since the tower would be 303 ft. rather than 324 ft. high. The second sentence in the fourth paragraph on p. 129, "The length of shadows would be the same," has been deleted.

Guiding Downtown Development (GDD) contains suggestions for changes to regulations governing downtown development. Except for the recommended loading specifications, which the City Planning Commission has implemented as a matter of policy (Resolution 9286), none of the recommendations in GDD have been officially adopted, and the project is not required to conform to the recommendations. Alternatives C and D, pp. 128-132, present alternative designs that would conform to GDD, most recently released by the Department of City Planning in July 1982.

GDD contains nine different options for satisfying the recommended open-space requirement. The existing Planning Code does not require the provision of open space for office buildings; the project proposes an arcade and ground-level plaza. Under GDD, it would provide about 13,800 sq. ft. of open space, the same as that recommended as the open space requirement in GDD.

GDD would not require ground-floor retail space, and would not automatically result in more retail space than proposed in the project. All of the ground floor space in the project not required for lobby, loading or open space area is proposed for retail use (see Figure 5, p. 12).

In addition to rejecting GDD alternatives as economic underuses of the site, the sponsor has rejected them because the project already addresses the recommendations in GDD in several ways. The number and dimensions of loading spaces proposed would conform with the recommendations of Resolution 9286; dimensions of proposed curb cuts would not. The arcade and plaza would provide pedestrian interest and scale. Retail uses are proposed on the ground floor and clear glass in ground-level windows would provide a sense of activity for pedestrians.

The preferred alternative being proposed by the applicant would respond to several provisions of GDD: it would have a sculpted mass, a sloped roof to provide interest at the roof line, ground level open space available to the public and a base element relating to nearby older structures. See p. 329 for a discussion of this alternative.

The provisions of GDD are expressions of suggested policies which may or may not be formally adopted, but have not been formally adopted at this time, and are therefore not binding requirements.

#### DOWNTOWN EIR ALTERNATIVE

##### Comment

"Guiding Downtown Development [is] only one of the five alternatives in the Downtown EIR. Please analyze this project against the other alternatives under study, and against the major mitigation measure of annual limits.

"Add an alternative of a delayed project that is approved after the revisions to the Planning Code following the Downtown EIR. Presumably, once the environmental effects of cumulative development are known and mitigation measures can be added, the effects not yet known from this and other projects will be mitigated in a different manner - at least with information as the basis for them. Explain this alternative please." (Sue Hestor)

##### Response

The Downtown EIR is in preparation and not yet published. Comparison of this project, or any specific project, with broad, areawide alternatives that concern rezoning on the entire C-3 district and on which analyses have not been completed or published would be incomplete and/or inaccurate.

#### HALF FLOOR AREA ALTERNATIVE

##### Comment

"Add alternative with one-half the floor area and analyze its impacts." (Sue Hestor)



Response

A half-size alternative would have an FAR of 7:1, and would contain 172,970 gross sq. ft. It would have 12 stories and a penthouse. To the top of the 12th floor it would be 190 ft., and to the top of the penthouse it would be 205 ft. tall.

This alternative would contain about 148,260 sq. ft. of office space, with the ground floor containing retail, lobby, loading and arcade space. About 600 jobs could be accommodated (including office, retail and building operation employment). Housing demand under the OHPP formula would be for 132 units.

Shadows would be about 40% shorter than those of the project. The major differences between shadows from this alternative and those from the project would occur in mid-morning in spring and fall and in summer at noon. In the former case, the alternative's shadow would be about half that of the project shadow, allowing sunlight to reach the Chevron Garden Plaza and the Market St. sidewalk. In summer at noon, this alternative would not shade the Chevron Garden Plaza (the project would shade about half of this Plaza).

Transportation impacts are related to building floor area, so that total person trip ends would be reduced by about half from those of the project, to about 2,500 per day. Muni trips at the p.m. peak hour would be about 125. Pedestrian trips would number about 350 in the p.m. peak hour. This alternative, as the project as proposed, would have no noticeable effect on the operation of crosswalks at First and Mission Sts. On the assumption that 34 parking spaces would be provided, as with the project, vehicles leaving the parking garage during the p.m. peak would remain at 20. This alternative, as the project, would not have a noticeable impact on the Level of Service of the Mission/First intersection. Parking demand would be for about 160 long-term spaces and 15 short-term spaces. Energy use would be roughly half that of the proposed project.

## VIII. Summary of Comments and Responses

The sponsor has rejected this alternative because it would not provide the allowable area permitted by the Planning Code. The sponsor has introduced a design alternative, Alternative E (see p. 329), that, in the sponsor's opinion, satisfies those concerns raised about the project (design, parking, energy consumption, and fire safety), without reducing the floor area below that which is allowable by Code. The sponsor believes that Alternative E is superior in design and response to City and public concerns than either the project or the half-size alternative.

### J. STAFF-INITIATED TEXT CHANGES

#### ERRATA

The shadow diagrams, Figures 18-29, pp. 55-57 and 59-67 of the DEIR, contained several errors:

- the buildings next to Charles Schwab should be 30 ft. tall, not 80 ft.; and,
- some angles and building outlines were slightly in error.

None of these revisions results in greater impacts than shown in the Draft EIR. The revised shadow diagrams (Figures 18-29) are included here as pp. 315-326.

The titles of Figures 16 and 17, pp. 52 and 53, are revised to read, respectively: "Figure 16: View of the Project from Sansome St."; and "Figure 17: View of the Project from the South." The revised figures are included here as pp. 340 and 342.

Page 37, the first sentence of the second full paragraph, is revised to read: "The sidewalks on Stevenson St. are 8 ft. wide on both sides."



Page 80, fifth sentence of the first full paragraph, is replaced with the following: "In the 1981-82 fiscal year, 10% of General Fund revenues were allocated to Muni."

The eighth sentence of the same paragraph, change "deficit-per-mile" to "deficit-per-ride".

The following names have been added to the EIR Distribution list:

City Attorney's Office, City Hall, Room 206, Attention: Les Roody

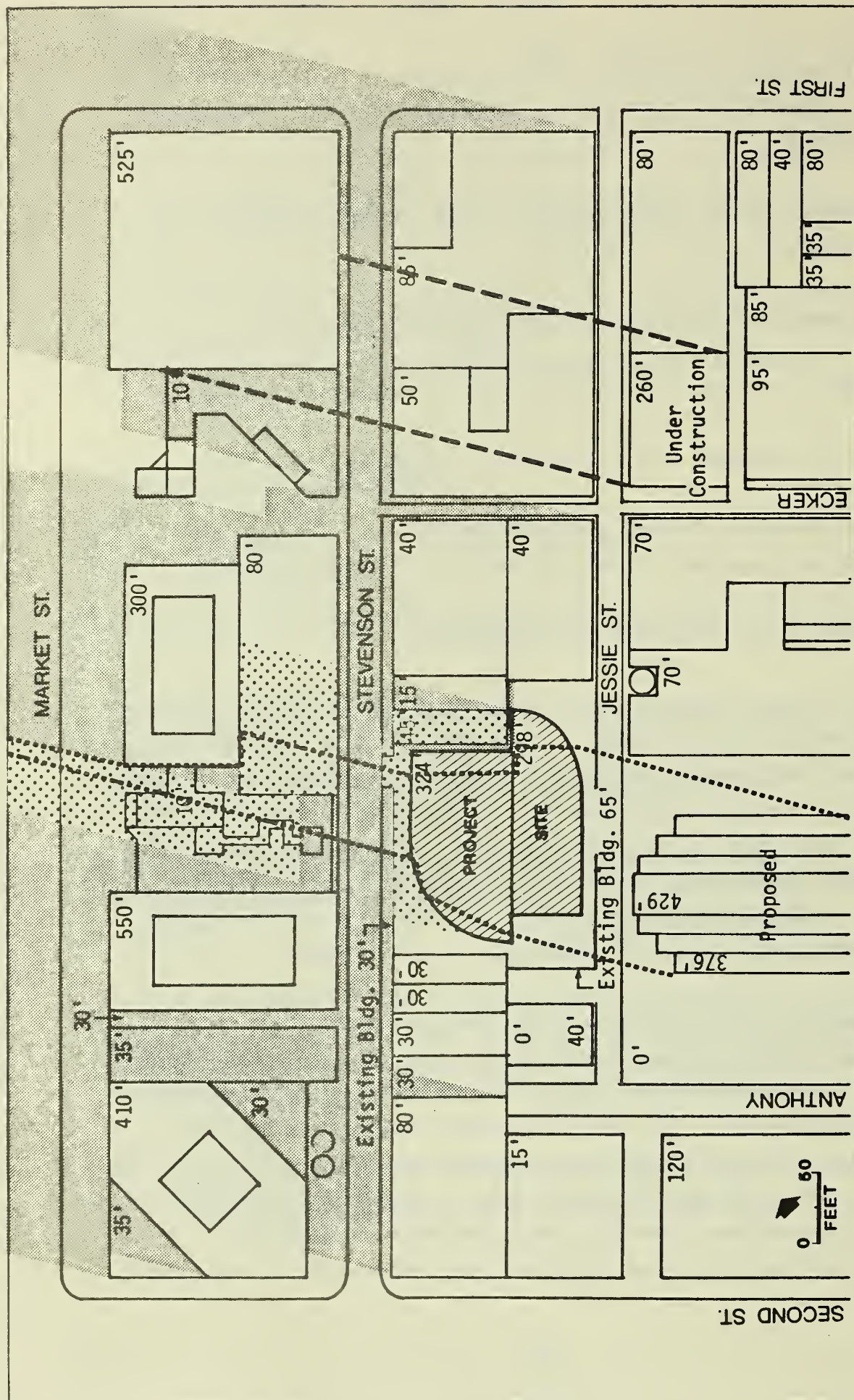
Gary Wing, 71 Stevenson St., San Francisco, CA 94105

Page 422, first sentence of first paragraph should read, "The land use approach, as it has been used in this [Draft] EIR" ("not supplemental").

#### LEVEL OF SERVICE AT THE FIRST/MISSION INTERSECTION

Table 10, on p. 95, has been revised as shown on p. 327 for the Mission/First intersection Levels of Service (LOS). Since publication of the Draft EIR, further analysis was conducted and consultation with the Department of Public Works took place to examine impacts on this intersection (Nelson Wong and Gilbert Sams, Department of Public Works, Traffic Engineering, June 3, 1983, and John Twichell/Associates, May 10, 1983, Impacts on First and Mission Sts. Intersection: 71 Stevenson Street Project; this report is on file at the Office of Environmental Review, 450 McAllister St., 5th Floor).

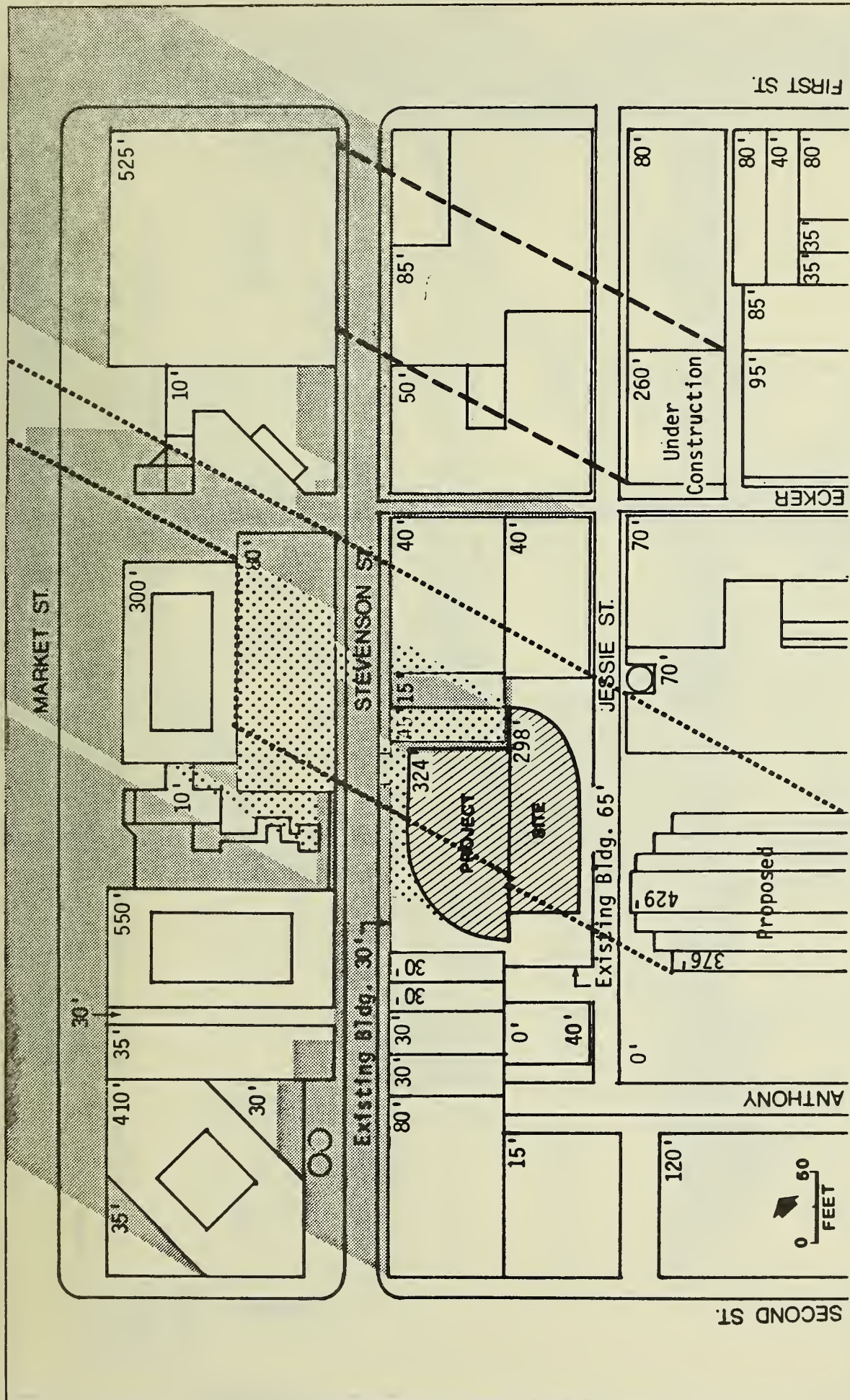
The LOS designations in the EIR were based solely on vehicle volume-to-capacity (v/c) ratios do not reflect other factors that may affect the operation of an intersection; vehicle flow is not necessarily the sole factor in determining LOS. For the Mission/First intersection this is particularly true, because of the high pedestrian volumes as described in the EIR (p. 39), which impede vehicle circulation. In addition, given the geometrics of the proximate freeway ramps at the Main and Beale St. intersections on Mission St., and their low levels of service as indicated in



● **FIGURE 18: Shadow Patterns -**  
December 10 A.M.

BASE MAP SOURCE: Gensler and Associates, Architects  
SHADOW INFORMATION: Environmental Science Associates, Inc.



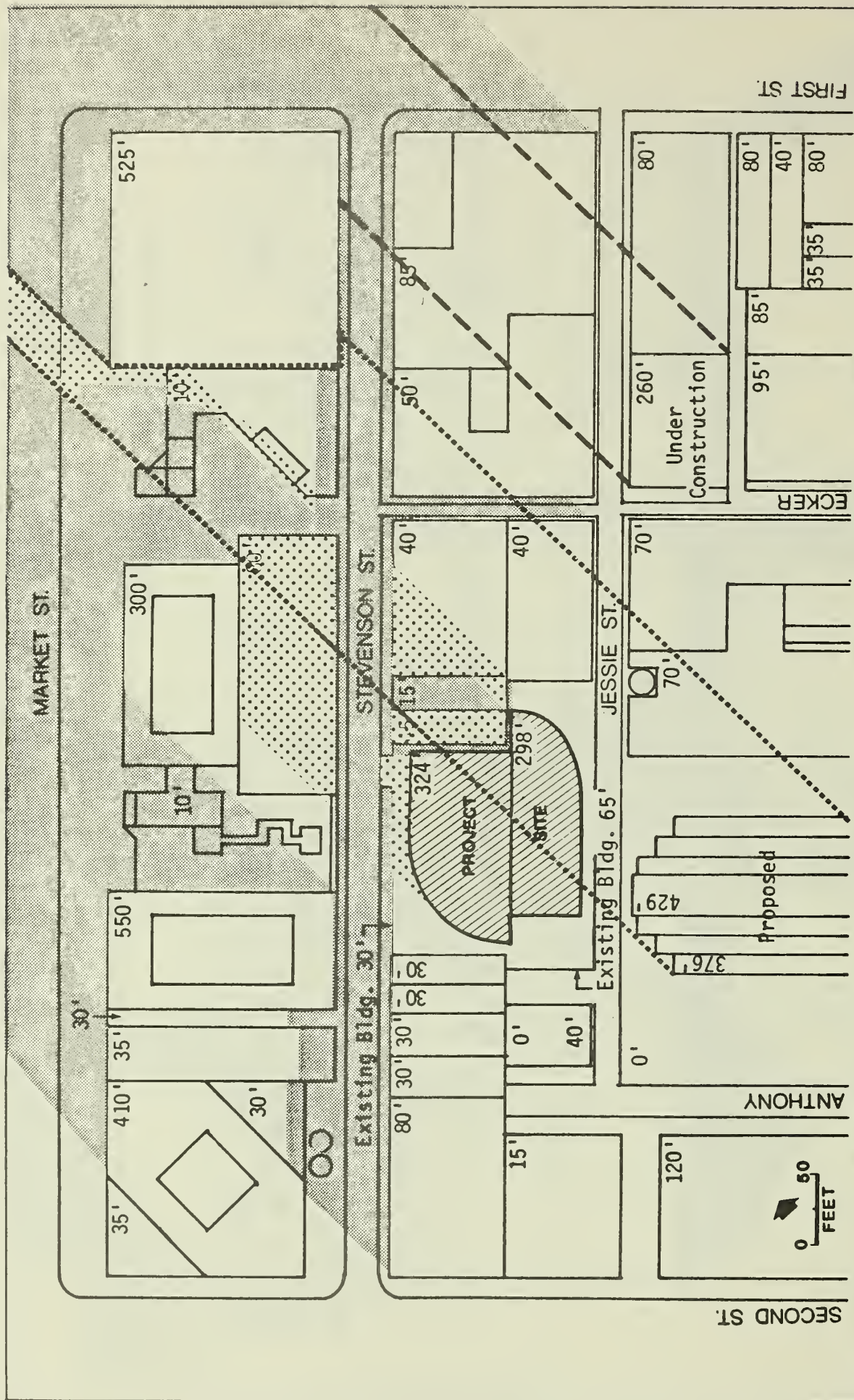


● FIGURE 19: Shadow Patterns -

December 11 A.M.

BASE MAP SOURCE: Gensler and Associates, Architects  
SHADOW INFORMATION: Environmental Science Associates, Inc.





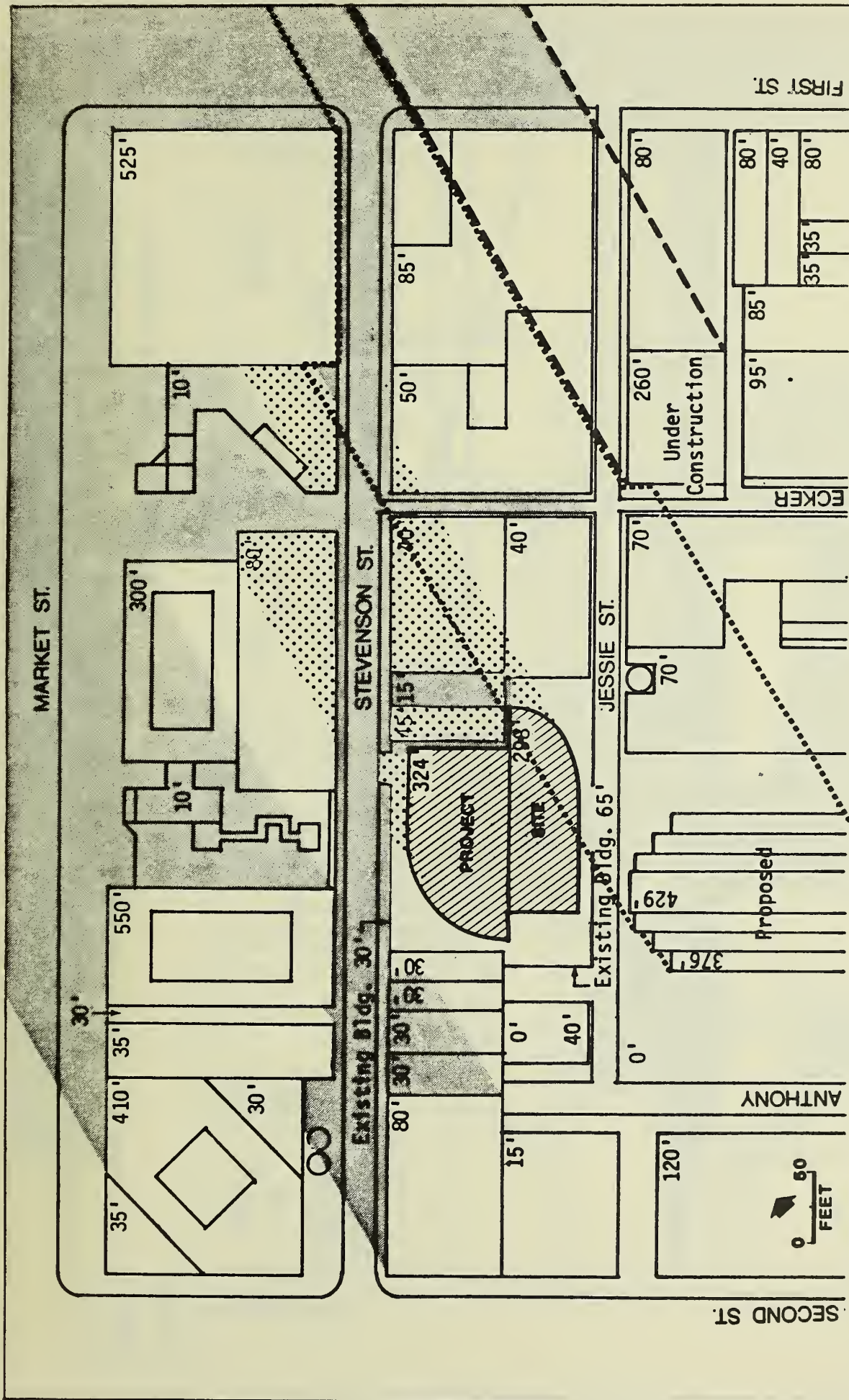
# LEGEND

- Existing Shadow
- Project Shadow
- Ecker Square Bldg. Shadow
- One Anthony Court Shadow

● FIGURE 20: Shadow Patterns -  
December Noon

BASE MAP SOURCE: Gensler and Associates, Architects  
SHADOW INFORMATION: Environmental Science Associates, Inc.





# LEGEND

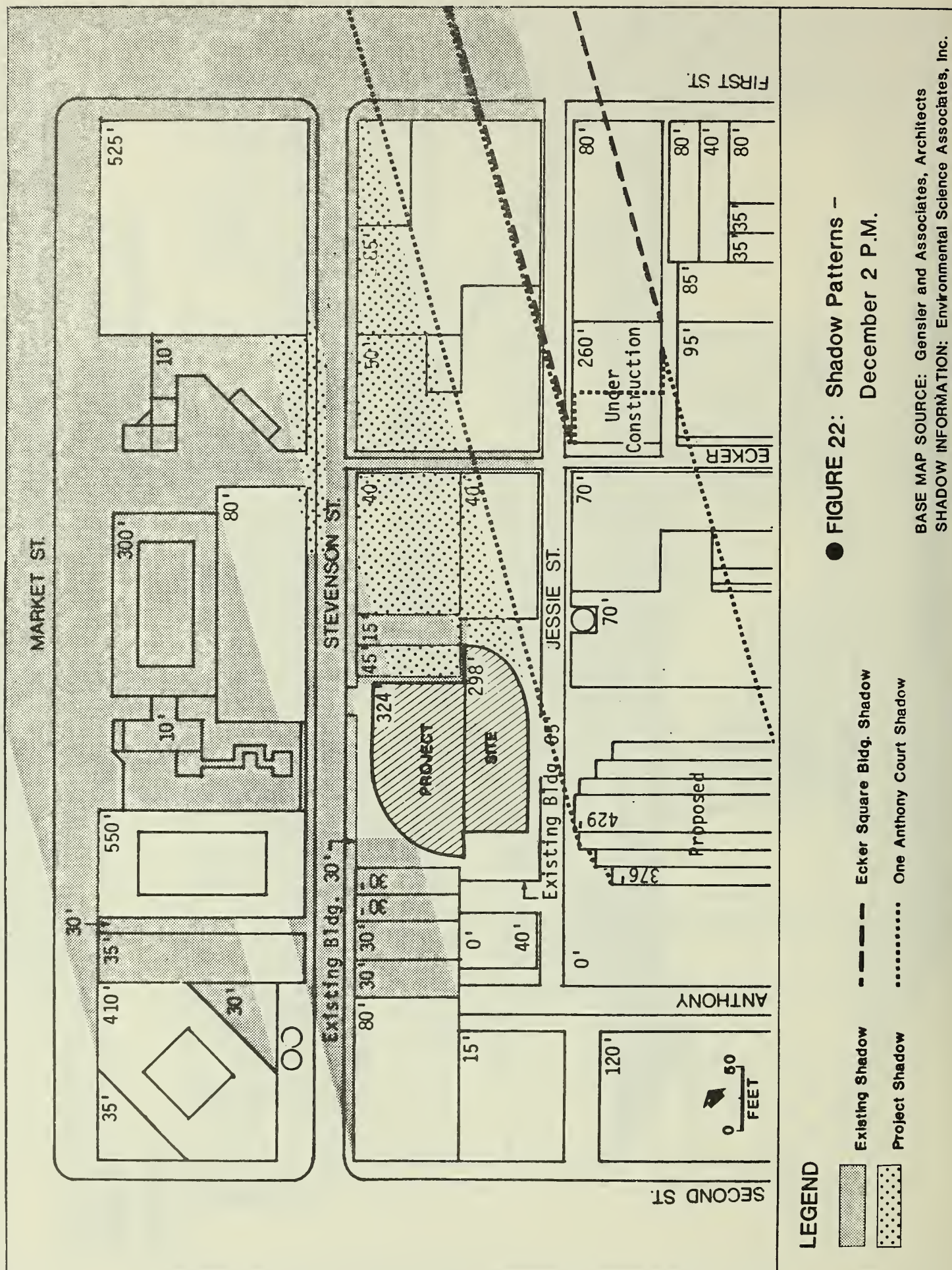
- Existing Shadow
- Project Shadow

- Ecker Square Bldg. Shadow
- One Anthony Court Shadow

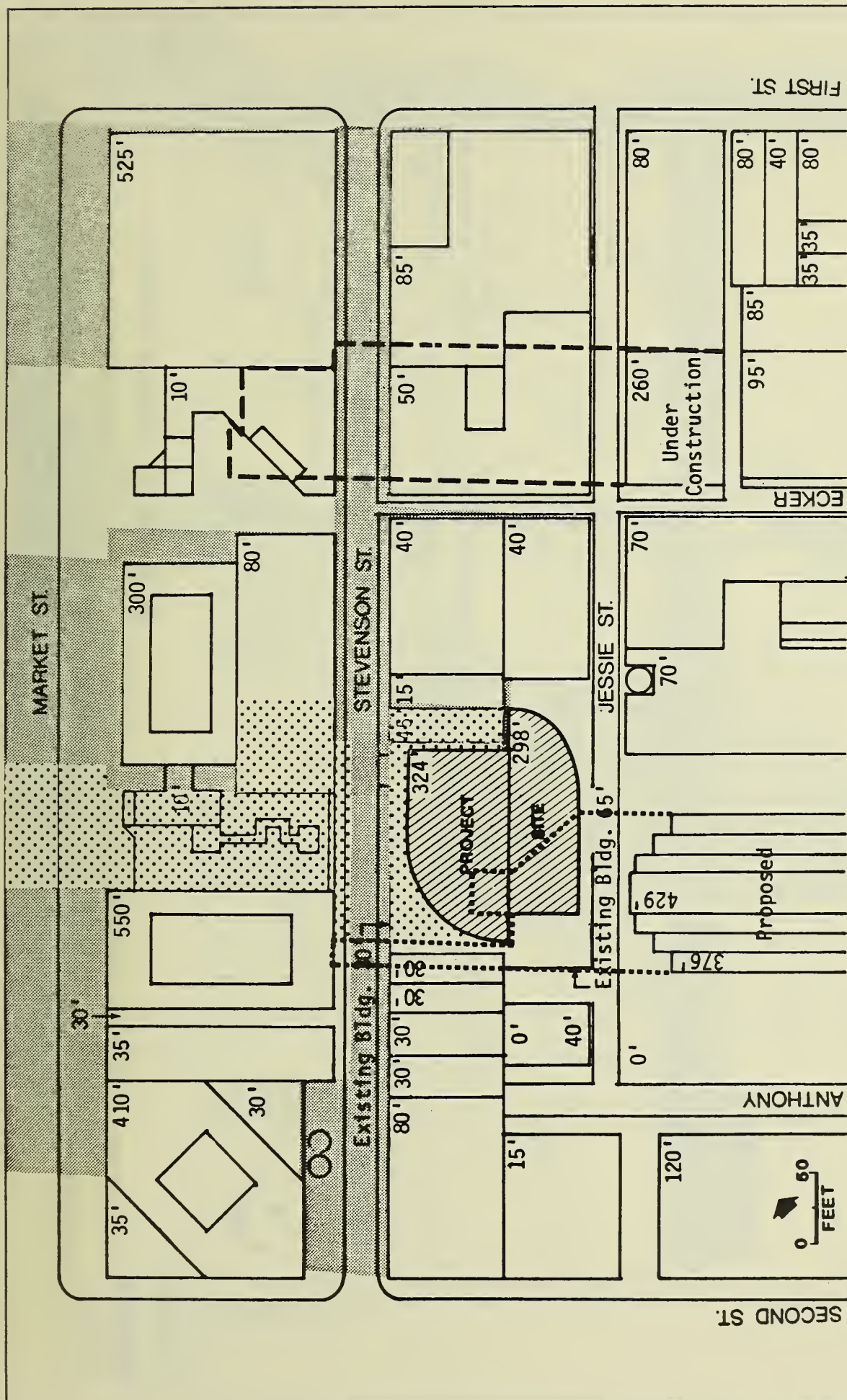
● FIGURE 21: Shadow Patterns -  
December 1 P.M.

BASE MAP SOURCE: Gensler and Associates, Architects  
SHADOW INFORMATION: Environmental Science Associates, Inc.





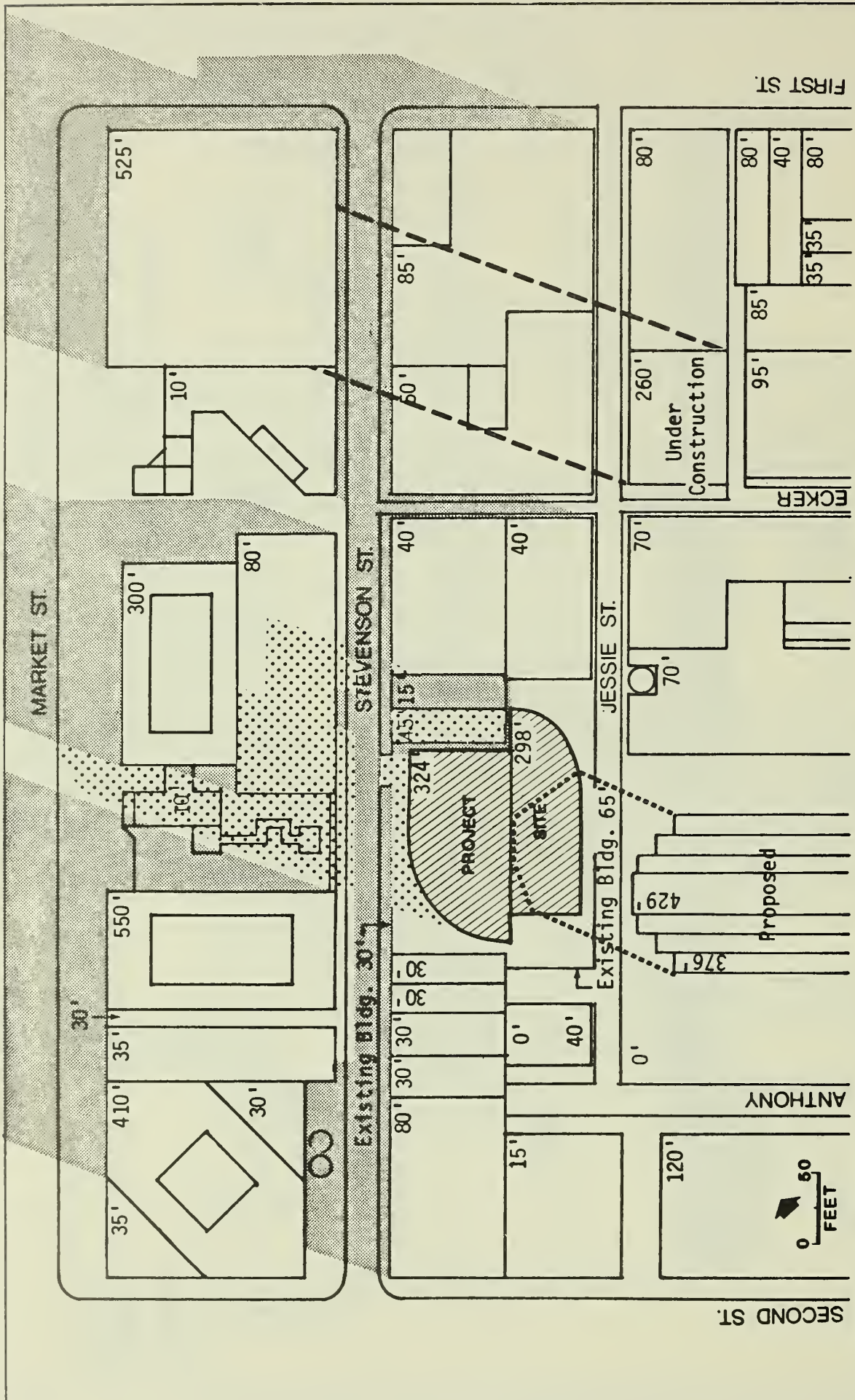




● **FIGURE 23: Shadow Patterns -**

**BASE MAP SOURCE:** Gensler and Associates, Architects  
**SHADOW INFORMATION:** Environmental Science Associates, Inc.





**LEGEND**

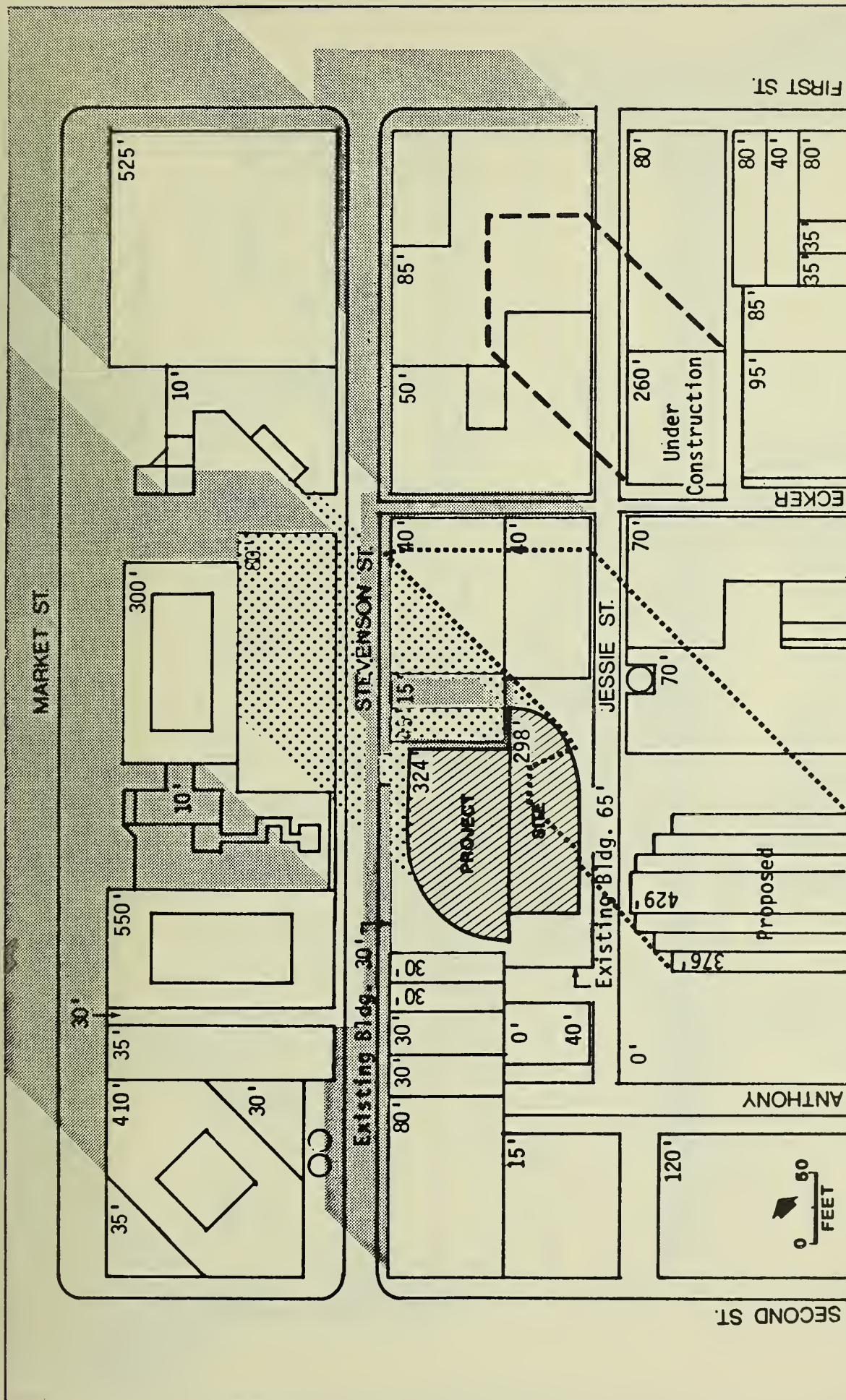
- Existing Shadow
- Project Shadow
- Ecker Square Bldg. Shadow
- One Anthony Court Shadow

● **FIGURE 24: Shadow Patterns -**

March/September 11 A.M./Noon

BASE MAP SOURCE: Gensler and Associates, Architects  
 SHADOW INFORMATION: Environmental Science Associates, Inc.



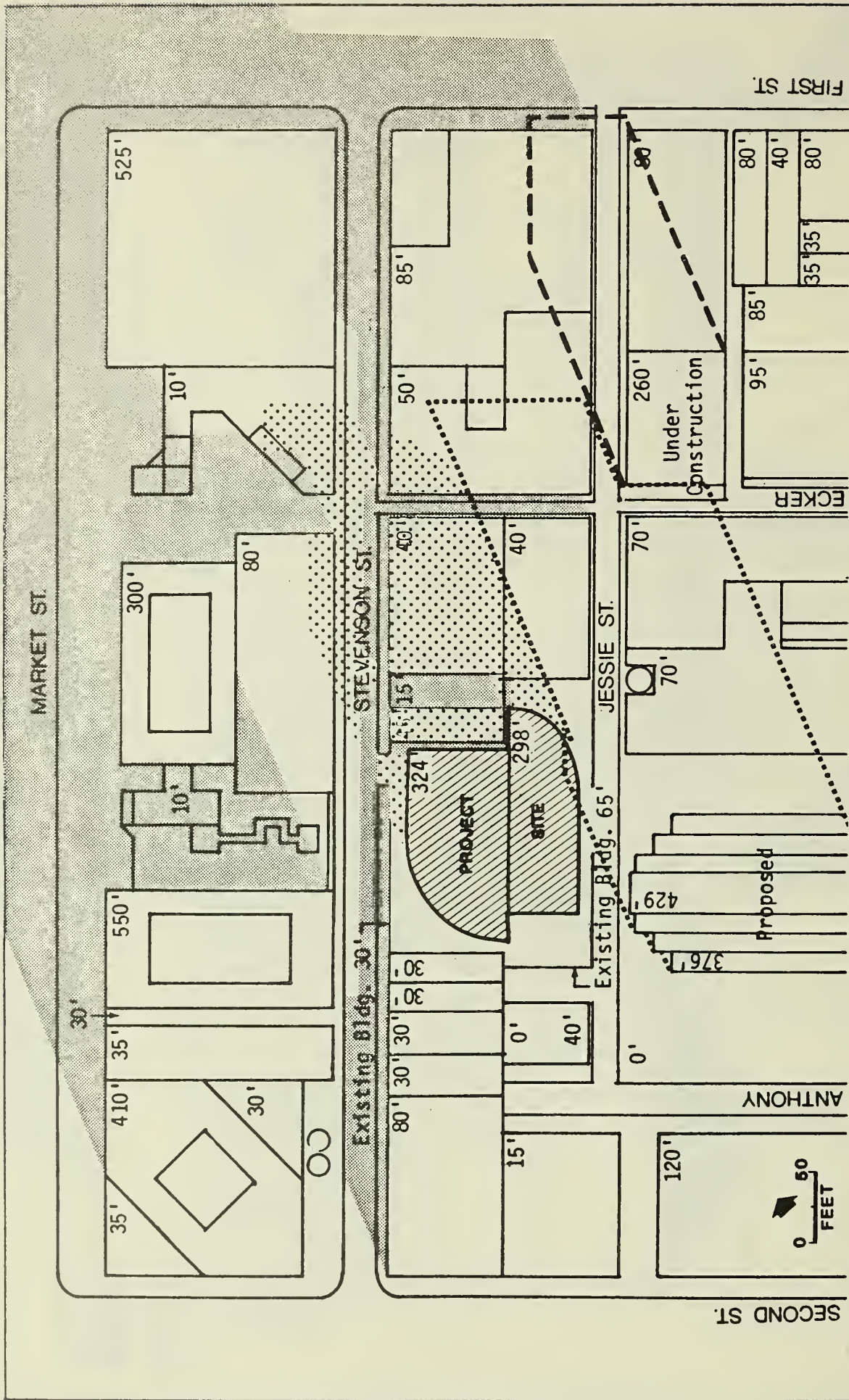


● **FIGURE 25: Shadow Patterns -**

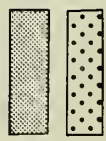
March/September Noon/1 P.M.

**BASE MAP SOURCE:** Gensler and Associates, Architects  
**SHADOW INFORMATION:** Environmental Science Associates, Inc.





## LEGEND

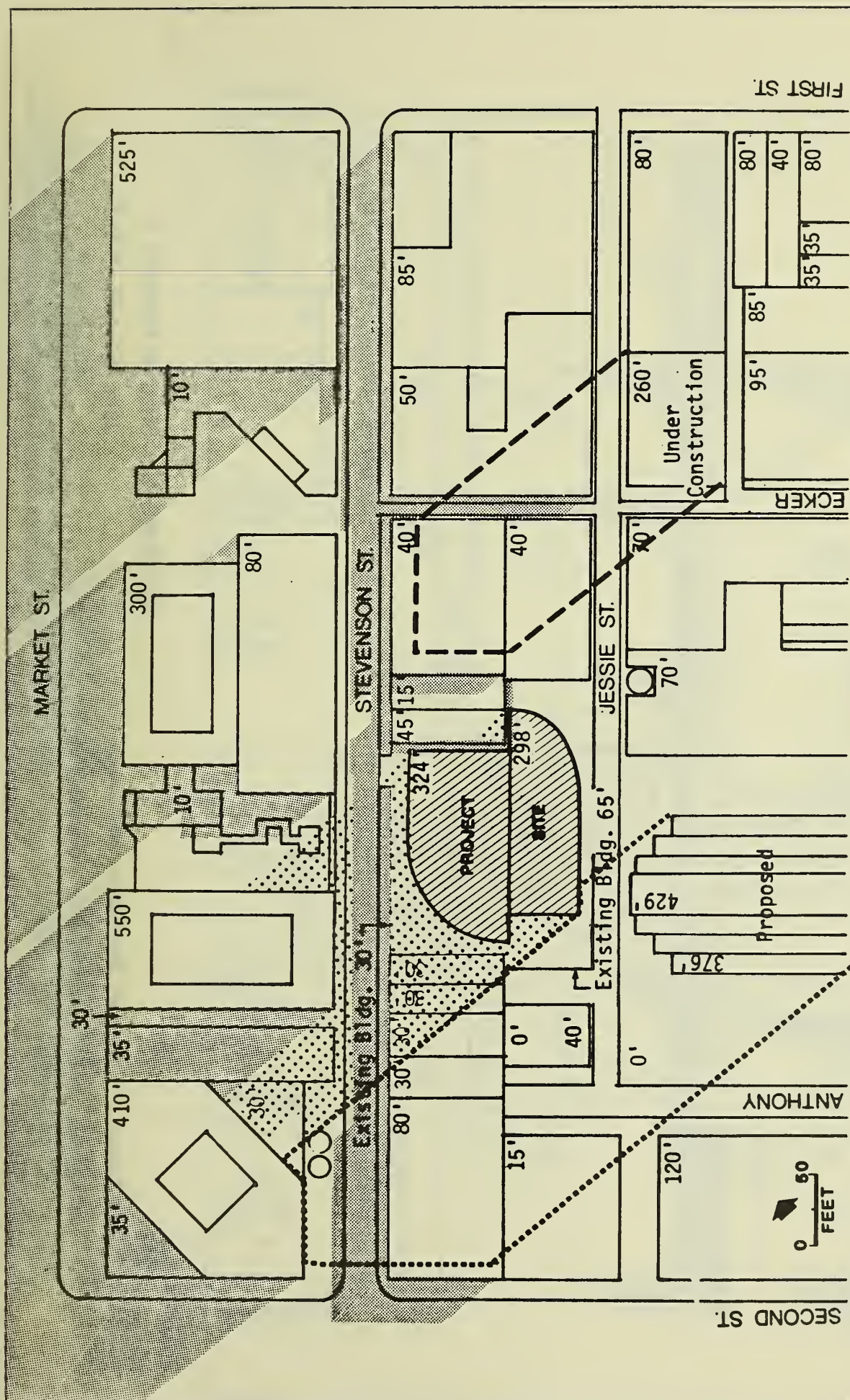


## ● FIGURE 26: Shadow Patterns -

March/September 1 P.M./2 P.M.

BASE MAP SOURCE: Gensler and Associates, Architects  
SHADOW INFORMATION: Environmental Science Associates, Inc.

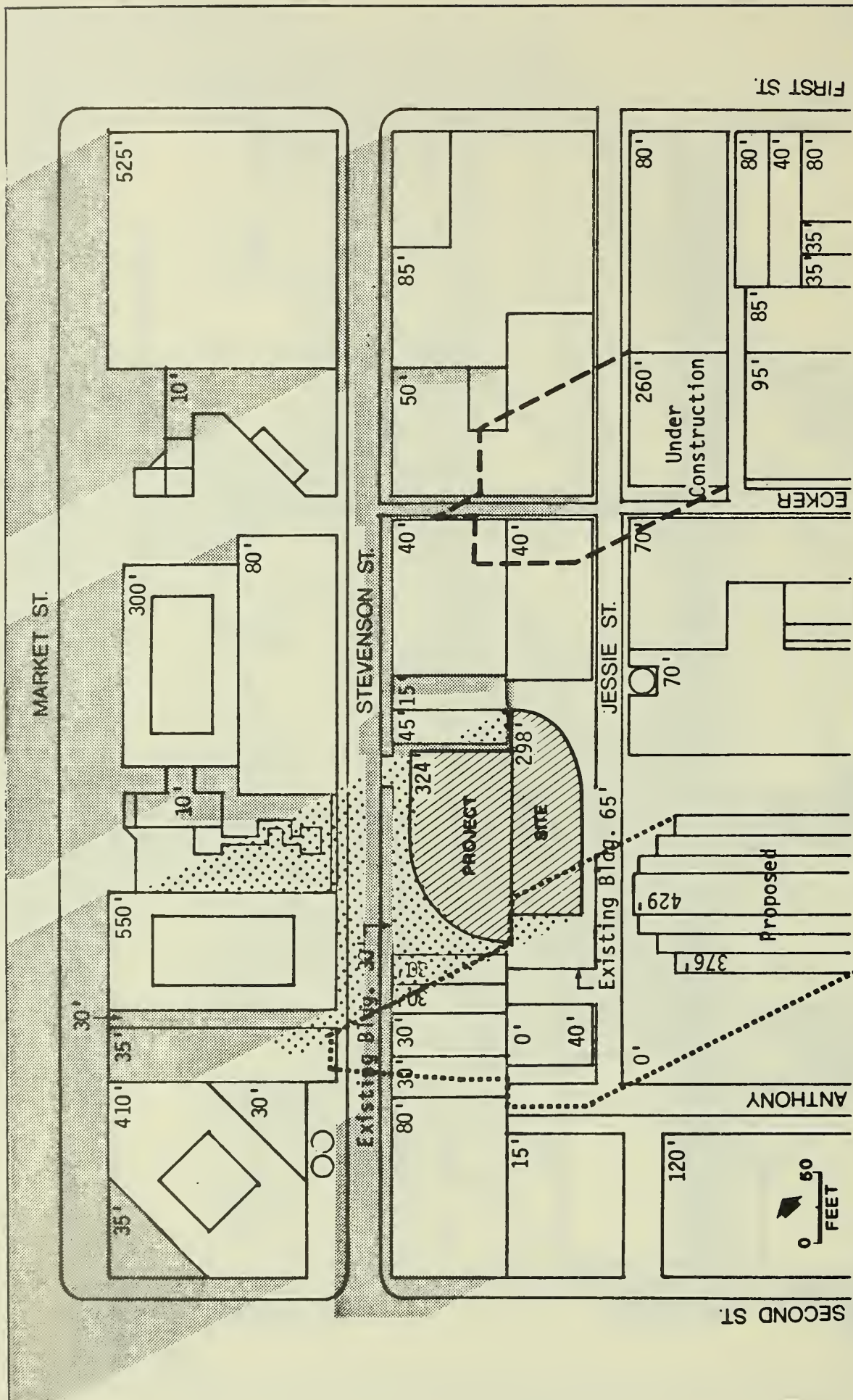




● **FIGURE 27: Shadow Patterns -**  
June 10 A.M. D.S.T.

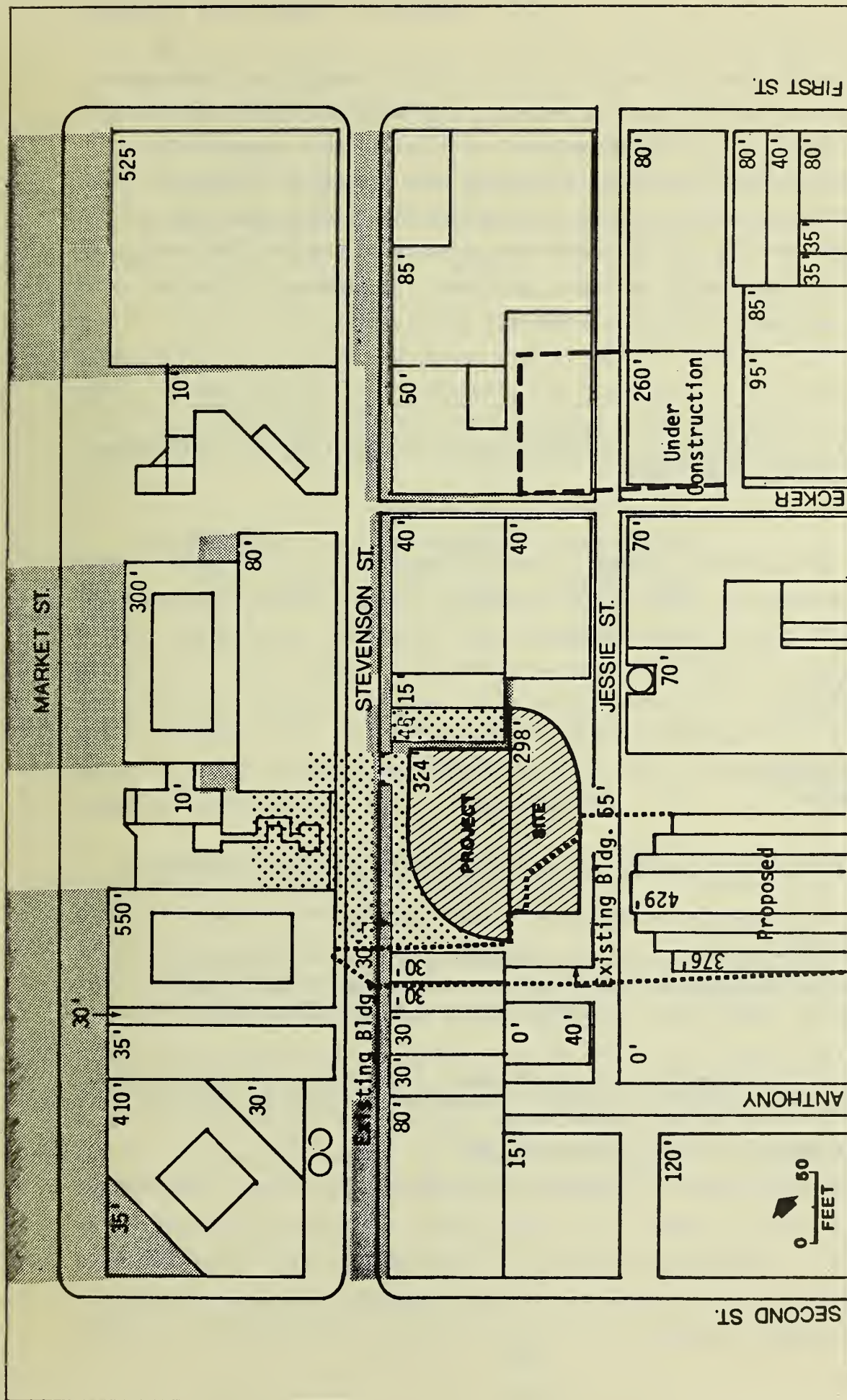
**BASE MAP SOURCE:** Gensler and Associates, Architects  
**SHADOW INFORMATION:** Environmental Science Associates, Inc.





● FIGURE 28: Shadow Patterns -  
June 11 A.M. D.S.T.





● **FIGURE 29: Shadow Patterns -**  
**June Noon D.S.T.**

**BASE MAP SOURCE:** Gensler and Associates, Architects  
**SHADOW INFORMATION:** Environmental Science Associates, Inc.

# VIII. Summary of Comments and Responses

Table 10 of the EIR, the Mission/First intersection is subject to "downstream congestion", where traffic flow is hindered not by the capacity of the intersection itself, but by the queueing of vehicles as they approach the freeway. In this situation, v/c ratios may be very low (since backed-up traffic prevents vehicles from proceeding through the intersection) even though vehicle demand for use of the intersection is very high. The revised Table 10 reflects the impacts of these conditions, in addition to the v/c ratio, in determining the intersection level of service.

TABLE 10: LEVELS OF SERVICE AT INTERSECTIONS IN THE VICINITY OF 71 STEVENSON ST. DURING PEAK HOURS

	MISSION/BEALE (PM)		MISSION/MAIN (AM)		MISSION/FIRST (PM)		
	LOS*	V/C**	LOS	V/C	LOS	V/C	LOS***
Existing (1982)+	D	0.89	D	0.85	B	0.61	C
With cumulative development without 71 Stevenson+	F	1.58	F	1.27	C	0.75	D/E
Cumulative development with 71 Stevenson	F	1.60	F	1.32	C	0.75	D/E

\* LOS stands for Level of Service which is defined in Table D-1, Appendix D, p. 413.

\*\* V/C stands for volume-to-capacity ratio, the use of which is explained in Appendix D, p. 417.

\*\*\* Levels of Service in this column represent reductions in the capacity of this intersection caused by the action of high pedestrian volumes, and vehicles queueing "downstream" at freeway ramps on Mission St. east of this intersection.

+ The 16.1 million gross sq. ft. of net new cumulative office and 0.5 million sq. ft. of retail development is listed in Table A-2 p. 399. The 71 Stevenson St. project has been separated from the approved totals shown in Table A-3.

SOURCE: Environmental Science Associates, Inc.



DOWNTOWN EIR CONSULTANT'S REPORT

On May 17, 1983, six months after the public hearing on the Draft EIR for this project, the Department of City Planning received preliminary copies of a Consultant's Report on Downtown San Francisco entitled, "Growth Management Alternatives for Downtown San Francisco." The Consultant's Report studied the C-3 Districts in some detail, covering both existing conditions and predictions for future growth under various control scenarios. Department staff has had limited time to evaluate the information in the Report, to determine whether data were processed using methods satisfactory to the Department or are comparable to other similar data available from other sources.

Some of the data for existing conditions in the C-3 Districts are relevant to analyses used in the EIR for 71 Stevenson St. A brief and somewhat cursory review of the data in the Consultant's Report indicates that the analyses presented in this project EIR provide adequate estimates of potential project and cumulative impacts. If base data from the Consultant's Report had been available at the time the 71 Stevenson St. Project Draft EIR was in preparation, calculations would have shown impacts of the same order of magnitude as those shown in the present EIR.

For example, the EIR assumes 250 gross sq. ft. of office space per employee; the Consultant's Report shows that for primary office space, the average for all downtown buildings is about 275 gross sq. ft. Therefore, the EIR overestimates the number of office employees by about 10% if new buildings are similar to the average downtown office building.

Other areas of the report contain more complicated analyses and it is not possible to determine from a single quick review that analyses in the subject EIR are similarly accurate. For example, although very limited review of the Consultant's Report suggests that the percentage of total downtown jobs held by San Francisco residents is approximately 57%, rather than the 40% that has been estimated in the 71 Stevenson St. EIR, other information in the report suggests that a lower percentage would be more appropriately applied. For instance, the Report shows that the San Francisco share of downtown primary

## VIII. Summary of Comments and Responses

office workers is about 49%; the 71 Stevenson St. project would provide mainly primary office jobs. Elsewhere in the report, the authors suggest that the percentage of downtown jobs held by City residents is likely to decline over time, and that the percentage of downtown primary office jobs held by San Francisco residents would probably decline more than the percentage of overall jobs held by City residents. If the Report figures for primary office employees were applied to a calculation of San Francisco housing demand estimates, the results would be about 10% greater than the result shown in the EIR. As most projections in EIRs are not presumed to be accurate to better than  $\pm 10-15\%$ , the differences in analyses that might result from new data presented in the Consultant's Report on Downtown do not appear to be significant.

Thus, the EIR appears to predict impacts to within a reasonable range of accuracy. None of the impacts that are clearly shown in the EIR to be insignificant would seem to require major recalculation or revision such that the result would necessitate a change in this determination. Impacts shown to be significant based on the analysis in the EIR would remain significant.

### DESIGN ALTERNATIVE

The following alternative has been added beginning as p. 133 of the EIR.

#### "E. DESIGN ALTERNATIVE

"This building scheme, Alternative E, is being offered as a design alternative to the project. It is in response to comments made by members of the City Planning Commission, the staff of the Planning Department and the public, on the current project design and its impacts. The design attempts to minimize the impacts that the height and bulk of a new highrise can have on surrounding buildings and public spaces.

"In addition to the specific impacts associated with the design of Alternative E, the wind analysis on pp. 364-382 reflects impacts attributable to the Lincoln Plaza project proposed at Anthony and Mission Sts., and the project proposed at 49 Stevenson St. to provide a



site-specific examination of the combined effects concentrated on a heavily pedestrian-oriented block. The 49 Stevenson St. project is still in preliminary stages of Department review; the project has undergone several revisions since the Department accepted the request for environmental analysis. The wind impact analysis included the bulk configuration of the 49 Stevenson St. project that was current at the time to provide a general picture of the effects a project on that site would have. More specific impacts of the project, at the point when the project's design and bulk are better defined, would be discussed in its environmental evaluation.

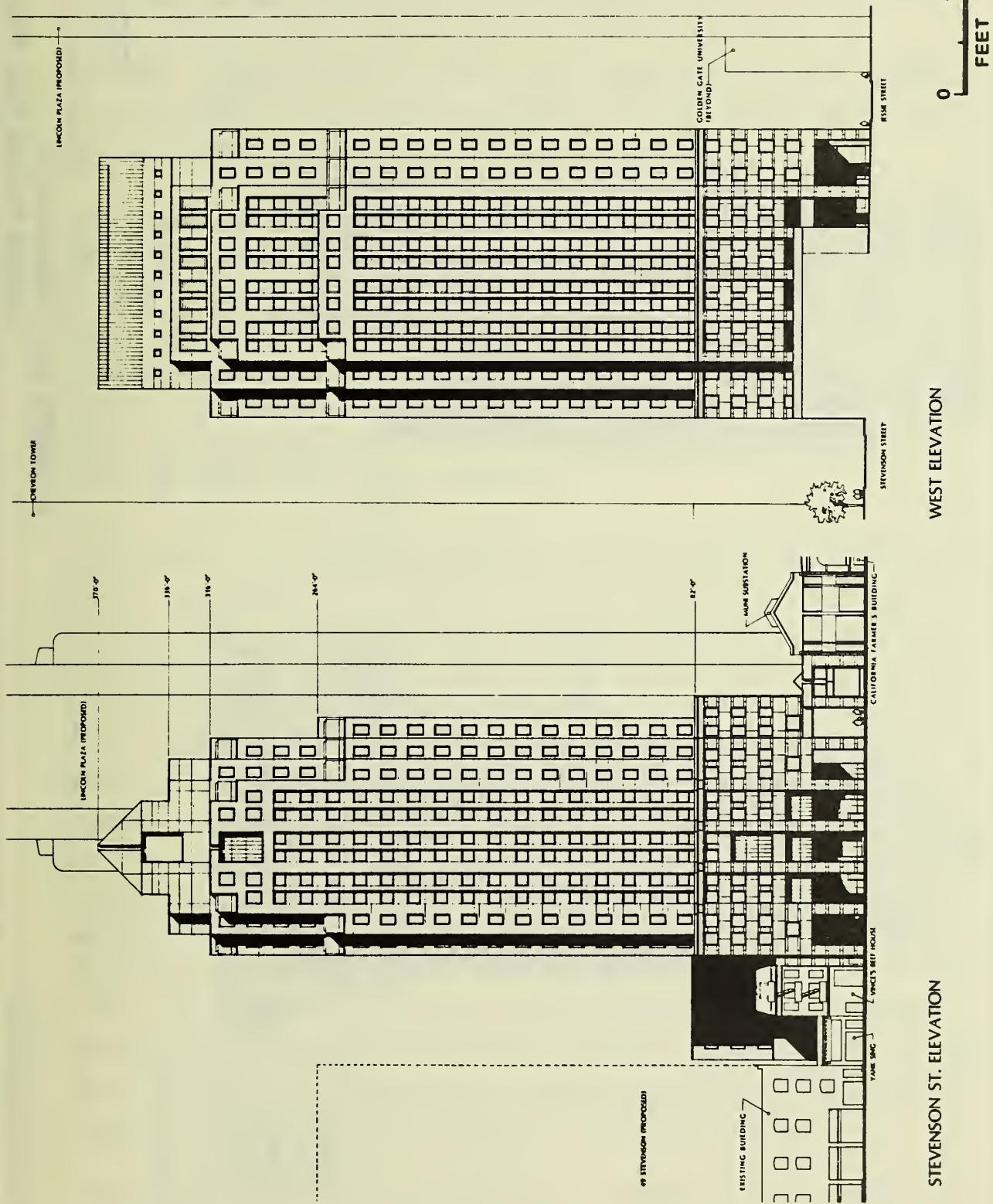
"Figure 37, p. 331, shows the Alternative E site plan in the context of its setting, including buildings proposed at 49 Stevenson St. and at Mission and Anthony Sts. (Lincoln Plaza). Alternative E would have 23 stories, a mezzanine and roof-top penthouse containing mechanical equipment, and a basement level. The building would be 316 ft. tall to the top floor. The mechanical penthouse would step in from the 23rd floor; at this level the building would be 335 ft. tall. The narrow, ornamental pitched roof would be about 35 ft. tall.

"While the overall height of the alternative would exceed the height of the project at 324 ft., the bulk would be substantially reduced. The massing of the alternative has been concentrated towards the eastern portion of the site in order to maximize daylight and sky visible from the Sansome St. view corridor. The scheme incorporates a stepped form resulting from a transfer of bulk to the lower part of the building, creating a slimmer tower than that of the project, while maintaining the street level public amenities in the form of an arcade and plaza, responding to policies of the Comprehensive Plan and Guiding Downtown Development (see Figures 38 and 39, pp. 332-333).

"The building would consist of three separate building sections (base, middle and top). The base element, consisting of the first five stories, would have a height of 82 ft., and would be faced in granite, marble, or shaped precast concrete. The middle section, floors six through 19, would consist of rectangular inset window openings on a precast-concrete-clad

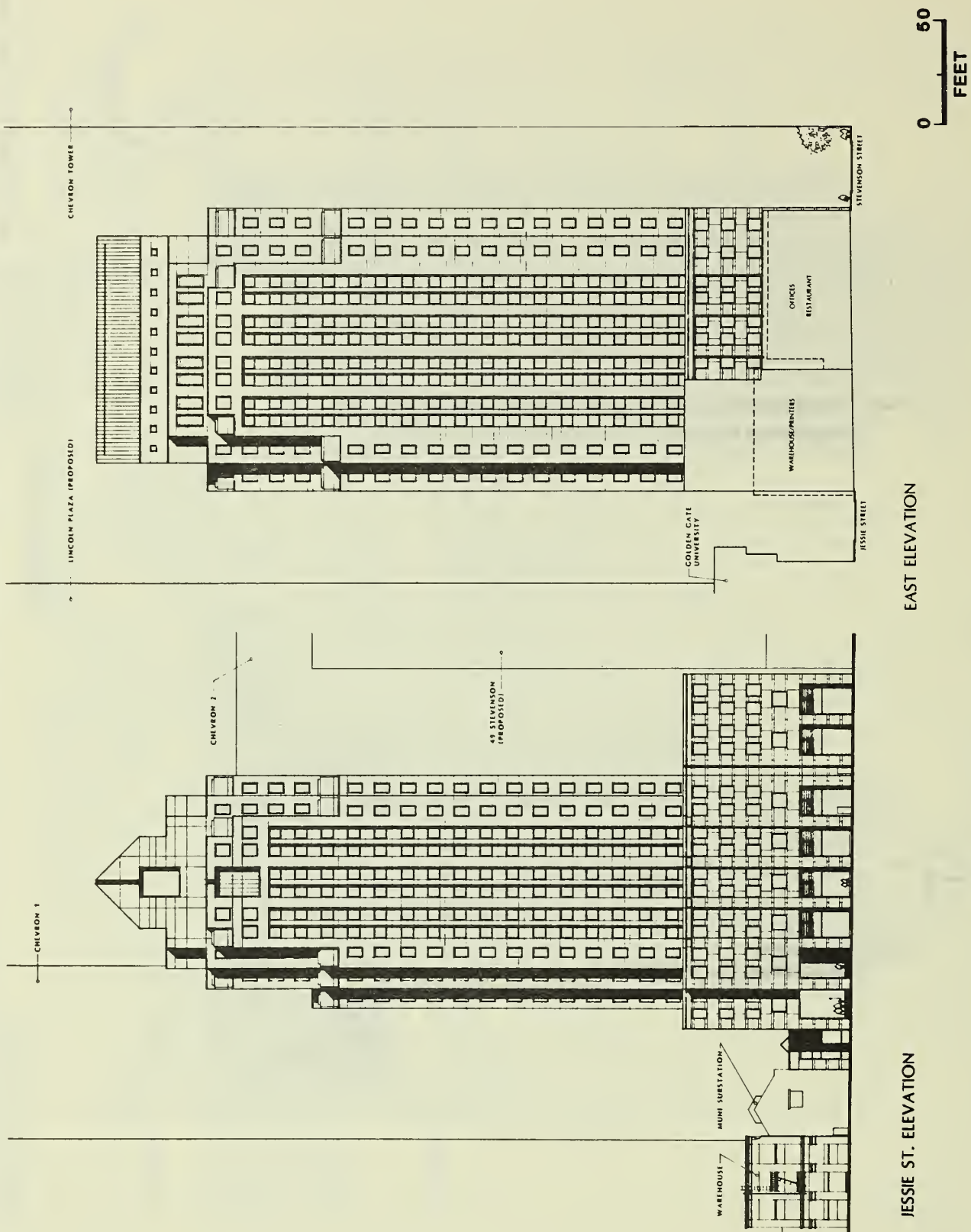






● FIGURE 38: Alternative E - Stevenson St. and West Elevations

SOURCE: Kaplan/McLaughlin/Diaz



JESSIE ST. ELEVATION

EAST ELEVATION

● FIGURE 39: Alternative E -  
Jessie St. and East Elevations

SOURCE: Kaplan/McLaughlin/Diaz



## VIII. Summary of Comments and Responses

surface. The top section (floors 20 through 23) would be set off from the middle section by a series of horizontal setbacks above the 19th floor. Facade materials have not been determined for this section of the building. The tower would be built to lot lines on Stevenson St. above the second floor. The color of the building has not been determined, but would be light.

"The ground floor would contain about 3,000 sq. ft. of retail sales area, the building lobby, a security desk, and the loading area (see Figure 40, p. 336). A covered walkway through the ground floor, lined by retail shops, would connect the building's Stevenson and Jessie St. entrances and allow mid-block pedestrian passage (see Figure 41, p. 337). The retail spaces on the southern side of the site would be accessible from both the arcade and Jessie St. Retail uses could consist of restaurants, print shops and other office-related services.

"The Stevenson St. entrance would be defined by a loggia (a roofed gallery open to the street). The Jessie St. entrance would open onto a plaza. The Department of City Planning has requested that Jessie St. between the 71 Stevenson St. site and the Lincoln Plaza site be paved in conjunction with the plazas of the respective buildings, to form one large plaza. The plaza would be formed by collectively paving with identical material a portion of the project site facing Jessie St., a portion of Jessie St. and a portion of the Lincoln Plaza site opposite the project site on Jessie St. Because of its location at the southwest corner of the project site, the plaza would receive mid-day sun to encourage day use by the local employee and student population. The sponsor would also pave the Muni Substation driveway adjacent to the site, subject to the approval of the City. Paving of Jessie St. and the Muni Substation driveway would not include any relinquishment of control, ownership, or right of way of these areas by the City to the sponsors. Both would continue in their present function and no interference with their current use would result.

"Three loading docks would be provided, as with the project. Access to the loading bays would be from Jessie St. Access to the basement parking would be from Stevenson St.; about 75 spaces of attended parking would be

## VIII. Summary of Comments and Responses

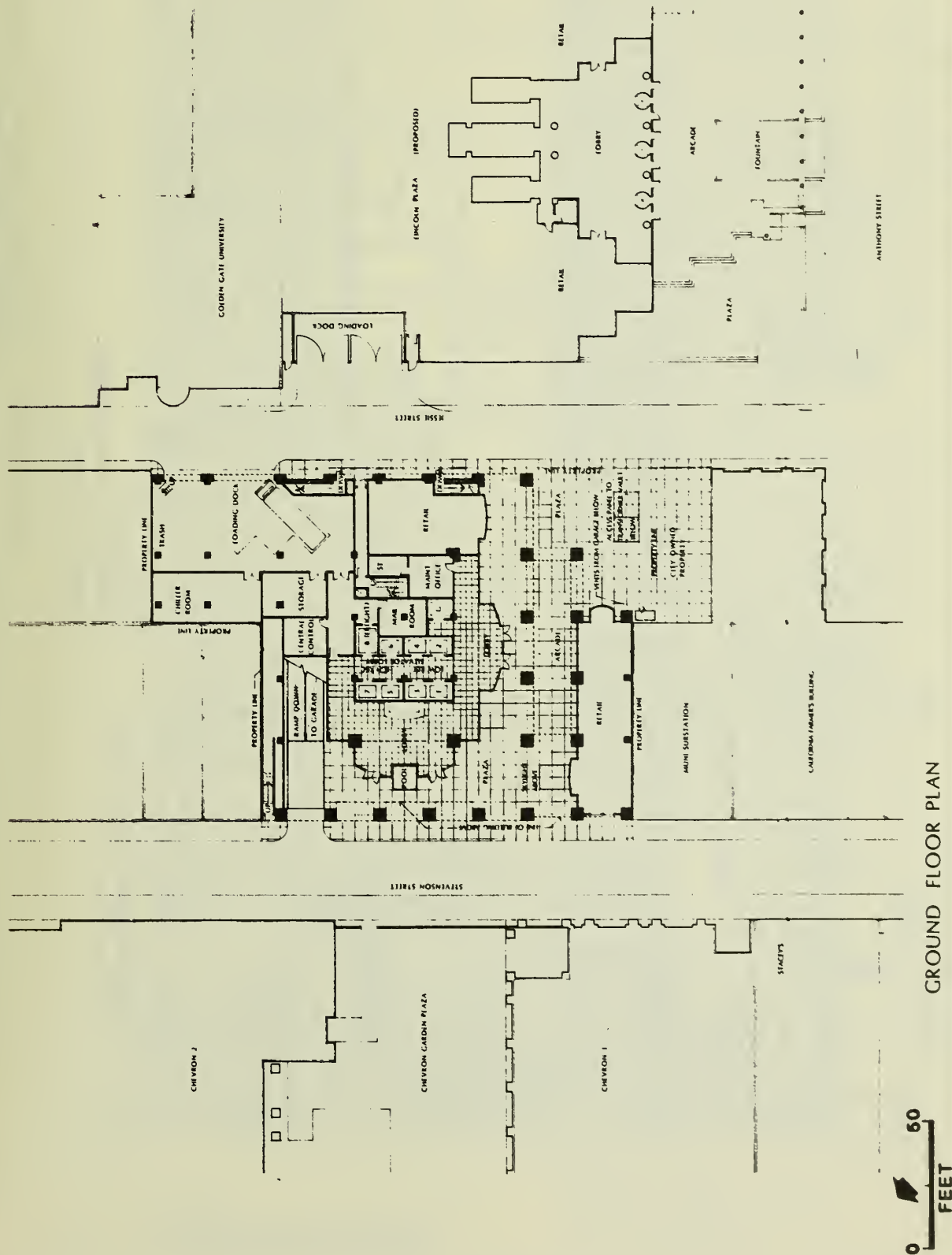
provided, compared to 34 self-park spaces in the project. The largest floors would contain about 19,000 sq. ft. of space (including elevators, restrooms and corridors). The smallest office floor would contain about 13,000 sq. ft. The building, containing a total of 345,850 gross sq. ft. of floor area (335,450 sq. ft. of office area), would have a Floor Area Ratio (FAR) of 14:1.

### "URBAN DESIGN

"The design of the tower as proposed would be composed of distinct geometric forms and facade treatments; the three separate building sections would be tapered towards the building's roofline (see Figure 42, p. 338). The gable (pitched) roof would create a distinct building silhouette as well as provide a functional form for the housing of mechanical equipment such as fans and cooling towers. This would be in contrast with the nearby box-like highrises and would be in keeping with the intentions of the Urban Design Element of the Comprehensive Plan and with policies contained in Guiding Downtown Development, June 1982. Vertical setbacks along the sides of the building would also taper the building's form and reduce the appearance of bulk. The project tower would be generally built to lot lines, respecting the orthogonal (right angle) building shapes on Stevenson St. The project's building mass and loggia along Stevenson St. would maintain the street wall and not expose the sidewalls of neighboring buildings.

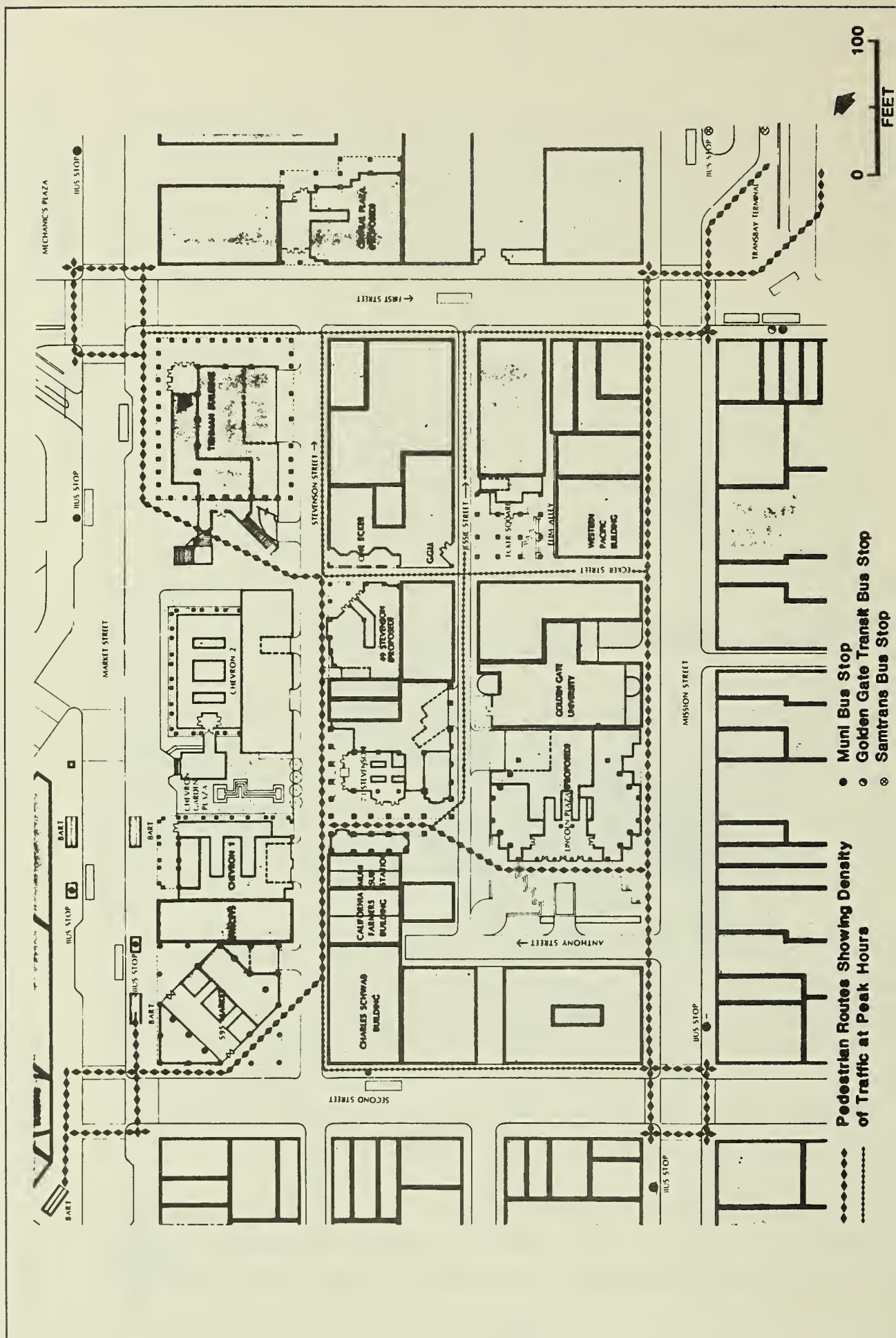
"The cornice and parapet lines at the 82-ft. height of the base element would relate to the nearby older buildings, including the Charles Schwab Building on the corner of Stevenson and Second Sts. and the lower part of the Chevron Building opposite the project site, as well as the older Jessie St. office buildings to the east. The setbacks on the west facade are designed to preserve the view slot of daylight and sky currently visible from Sansome St. north of Market St. (see Figure 43, p. 339; this Figure can be compared directly to Figure 16, p. 340). A view of the alternative from the south is shown in Figure 44, p. 341, which can be compared directly to Figure 17, p. 342. The Lincoln Plaza development, if constructed as currently designed, would completely block the view of the building shown in Figure 43.





● FIGURE 40: Alternative E -  
Ground Floor Plan

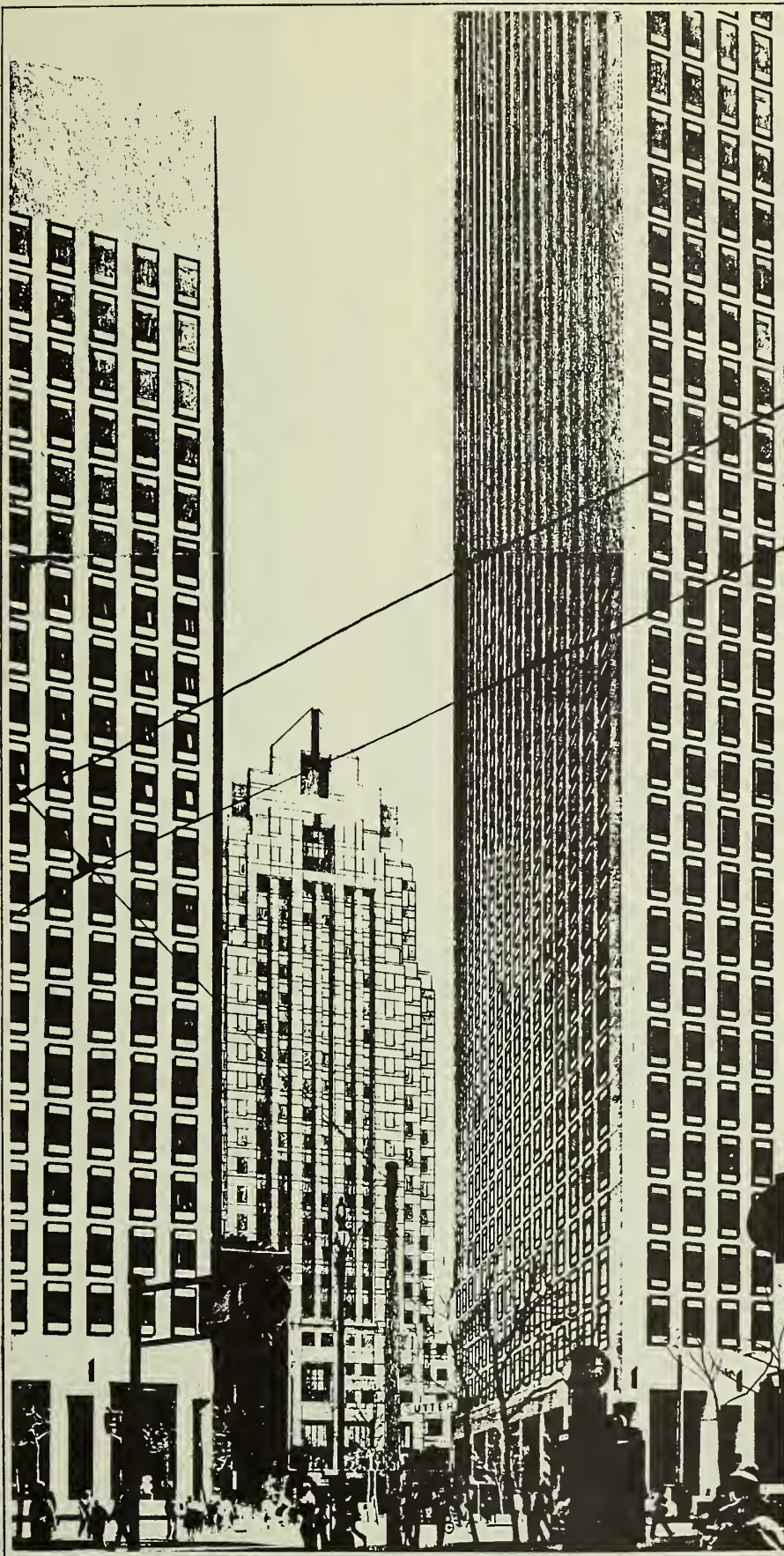
SOURCE: Kaplan/McLaughlin/Diaz



● FIGURE 41: Pedestrian Routes- Alternative E, Including Lincoln Plaza and 49 Stevenson

SOURCE: Kaplan/McLaughlin/Diaz

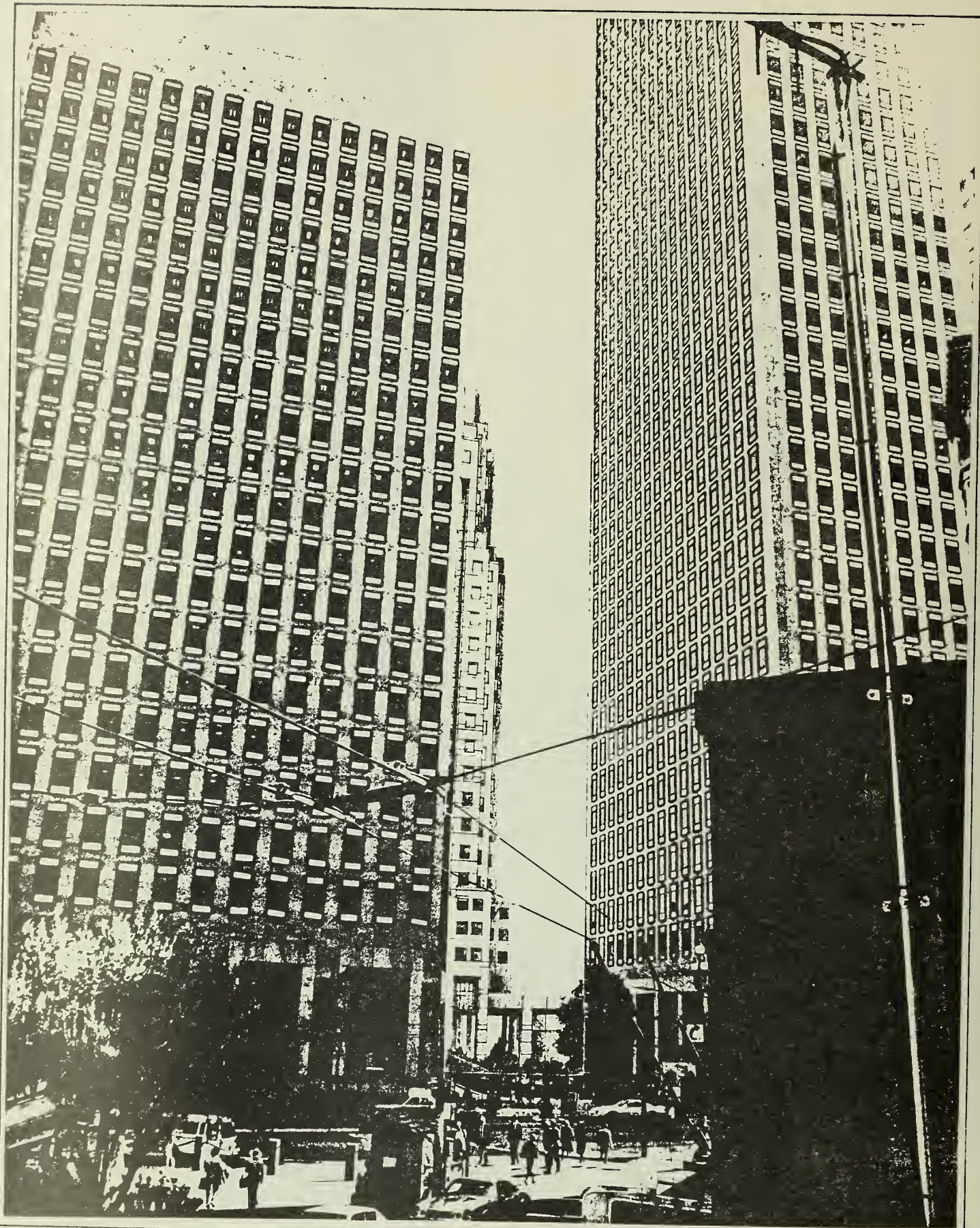




● FIGURE 42:  
View of Alternative E  
from the North

SOURCE:  
Kaplan/McLaughlin/Diaz, Architects and  
Environmental Science Associates, Inc.

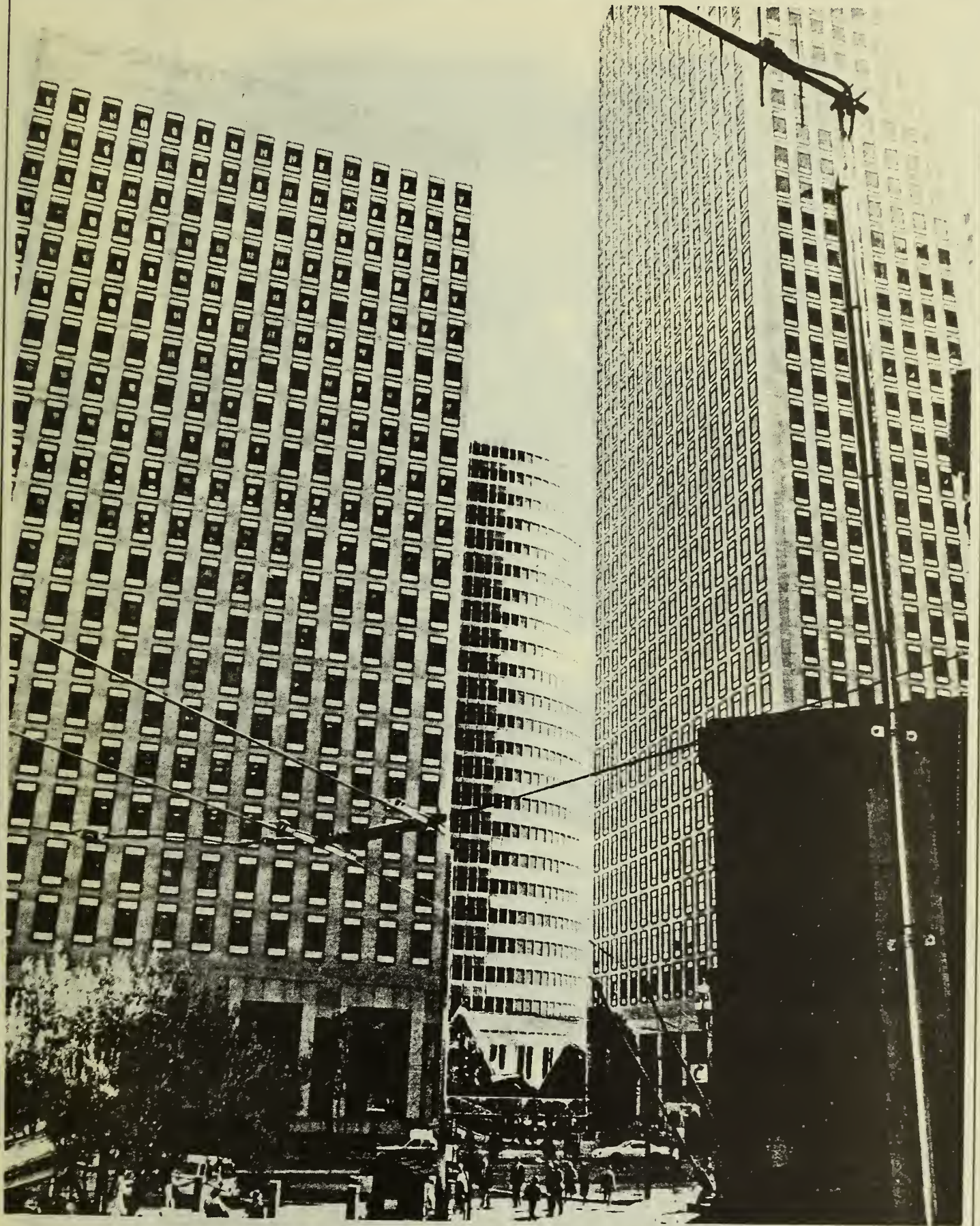




SOURCE: Kaplan/McLaughlin/Diaz, Architects and  
Gensler & Associates, Architects

● FIGURE 43: View of Alternative E  
from Sansome St.

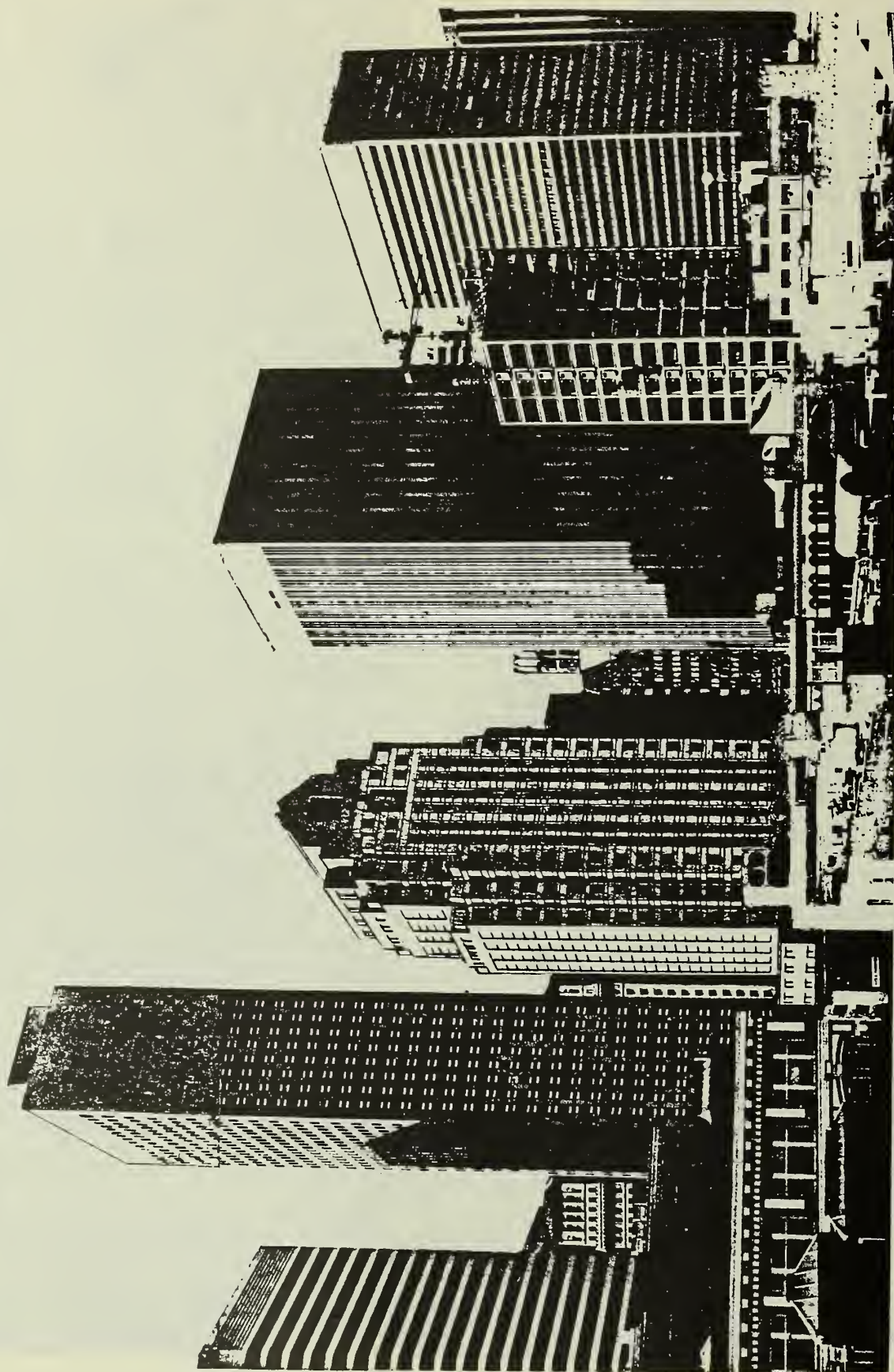




SOURCE: Gensler & Associates, Architects

● FIGURE 16: View of Project from Sansome St.





▲ 595 Market

▲ Chevron Bldg.

▲ ALTERNATIVE E

▲ 525 Market

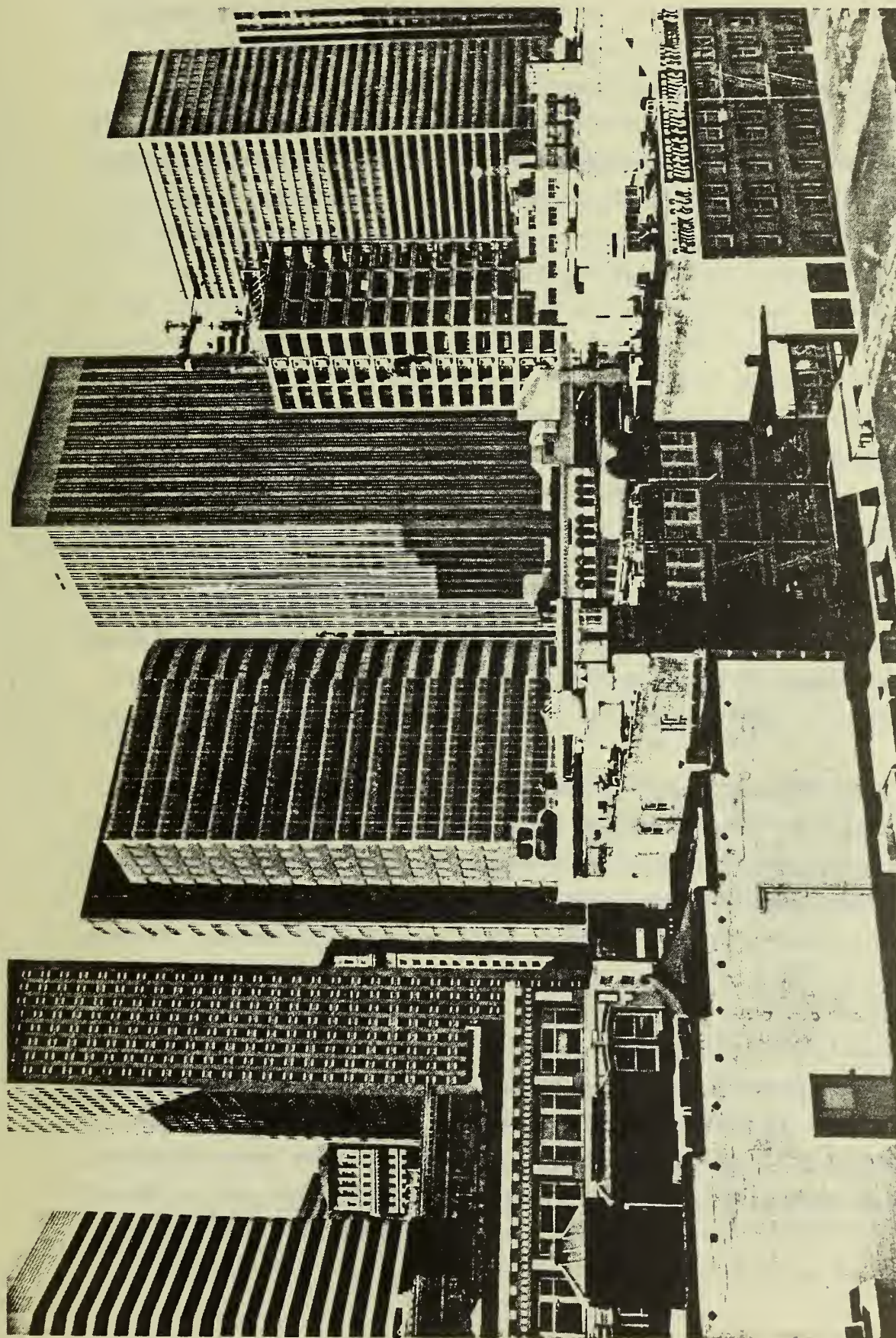
▲ Ecker Square

SOURCE: Kaplan/McLaughlin/Diaz, Architects, and  
Environmental Science Associates, Inc.

● FIGURE 44:

View of Alternative E from the South





▲ 595 Market St.

▲ Chevron Bldg.

▲ Project

▲ 525 Market St.

▲ Ecker Square

SOURCE : Gensler & Associates, Architects and  
Environmental Science Associates, Inc.

● FIGURE 17: View of the Project from the South



"With the intent of providing greater pedestrian amenities on Stevenson and Jessie Sts., Alternative E would have a series of pillars at the ground and mezzanine levels on Stevenson St. to define the street line. The scheme would complete the courtyard design of the Chevron Garden Plaza by matching the arcades at the base of the two Chevron buildings; the main axis of the alternative is on the axis of the Chevron Plaza. A pool is proposed next to the main entrance lobby to provide a relationship to the pool and fountain of the Chevron Garden Plaza.

#### "SHADOWS

"It should be noted that both Alternative E and the Lincoln Plaza designs have stepped shapes; the stepping and the foreshortening and blocking of shadows caused by intervening buildings results in shadow shapes that do not always correspond visually to the shapes of the two buildings. The shadow outlines for the Lincoln Plaza and 49 Stevenson buildings show where these shadows would fall where not interrupted by intervening buildings; only where these outlines are not shaded by a pattern would new shadows from these buildings result. The shadow diagrams require careful review because of their complexity.

"While the tapered design of Alternative E represents a reduction in building bulk from the proposed project, and its massing is concentrated on the eastern portion of the site to minimally affect views and daylight down the Sansome St. corridor, shadow patterns would be similar to those cast by the proposed project. Figures 45-62, pp. 345-357 and pp. 359-363, show shadow patterns at various times of the year as cast by Alternative E to supplement the text discussion below. As with the proposed project, shadows cast by this alternative at midday (from about 11:30 a.m. on) in winter and spring months, and from about 12:30 p.m. on in fall months, would have progressed eastward sufficiently to miss the Chevron Garden Plaza entirely or shade half or less of this plaza. (The shadow diagrams do not show shadows that are cast by buildings on the north side of Market St. The full set of shadow diagrams are available for public review at the Office of Environmental Review, 450 McAllister St., 5th Floor.)



"Spring

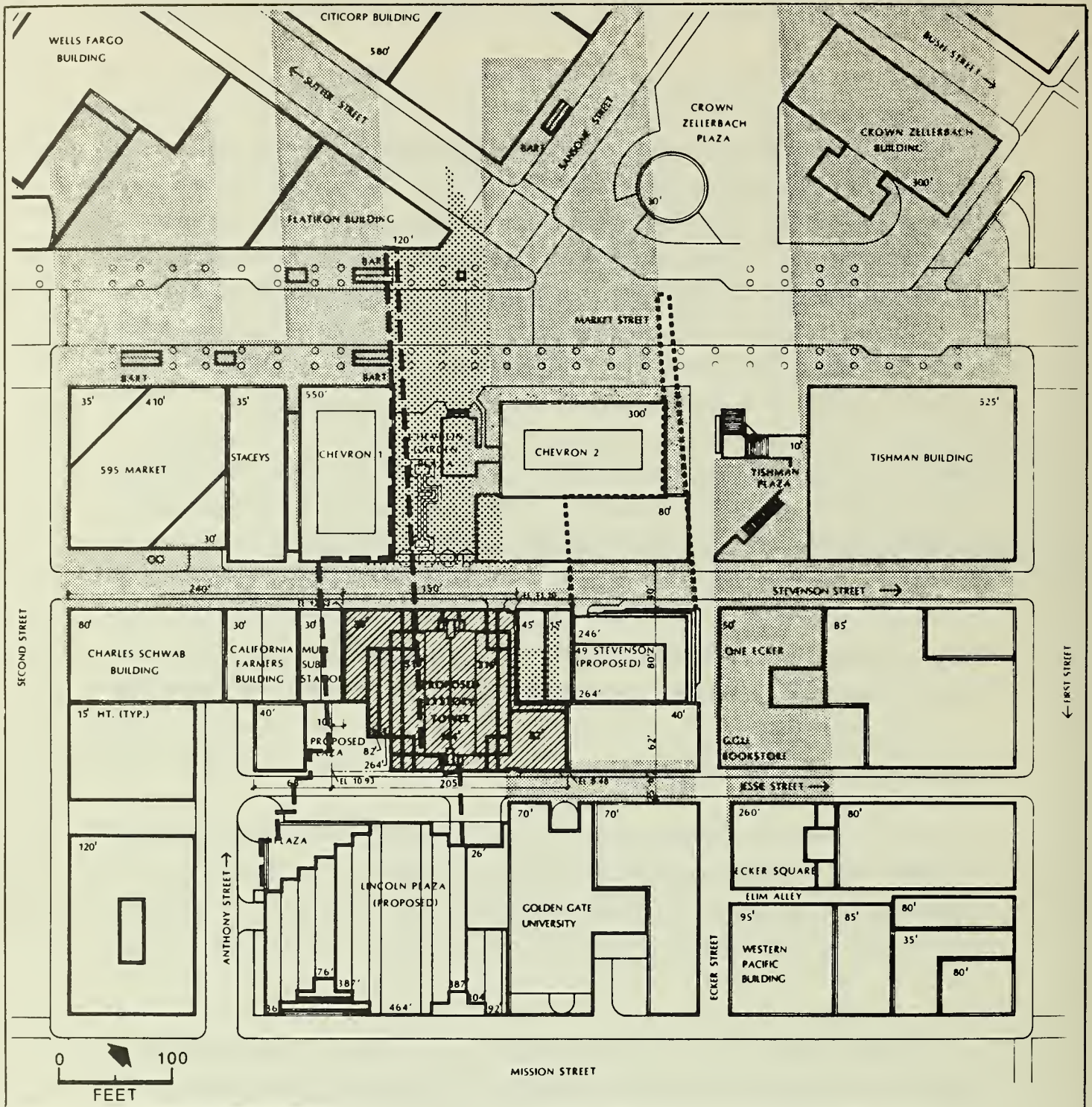
"At 10 a.m., Alternative E would shade the Chevron Garden Plaza and sidewalks on both sides of Market St. (see Figure 45, p. 345). The Alternative's Jessie St. plaza would be shaded by the proposed Lincoln Plaza building at 11 a.m.; the Alternative would shade a little more than half of the Chevron Garden Plaza, and a portion of the southerly Market St. sidewalk. At noon, the alternative's Jessie St. plaza would be mostly in the sunlight. The Alternative would shade a portion of Stevenson St., including sidewalks on both sides of the street, and rooftops of buildings. The Alternative's Jessie St. Plaza would be almost entirely free of shadows from neighboring buildings. At 1 p.m., the building would shade Stevenson St. and its northerly sidewalk, roofs of buildings, and one corner of the elevated plaza of the Tishman building. The Alternative's Jessie St. plaza would remain mostly free of shadows.

"After 1 p.m., the building would not shade any public plazas. It would shade Stevenson St., moving eastward to cover primarily rooftops by 2 p.m.

"Summer (Daylight Saving Time)

"At 10 a.m., this alternative would shade the northerly half of Stevenson St., some roof area of nearby buildings, and a corner of the Chevron Garden Plaza. It would also shade a corner of the Alternative's project plaza on Jessie St. The Lincoln Plaza building would shade most of this plaza.

"At 11 a.m., the building would shade about half of the Chevron Garden Plaza, and Stevenson St. and its northwesterly sidewalk. The Jessie St. plaza would be entirely shaded by the Lincoln Plaza proposal. At noon, the building would shade the southerly half of the Chevron Garden Plaza, and Stevenson St. and its northerly sidewalk (see Figure 46, p. 346). The Jessie St. plaza would be almost entirely shaded by the Lincoln Plaza building.



## LEGEND



Project

Existing Shadow

New Shadow from Project

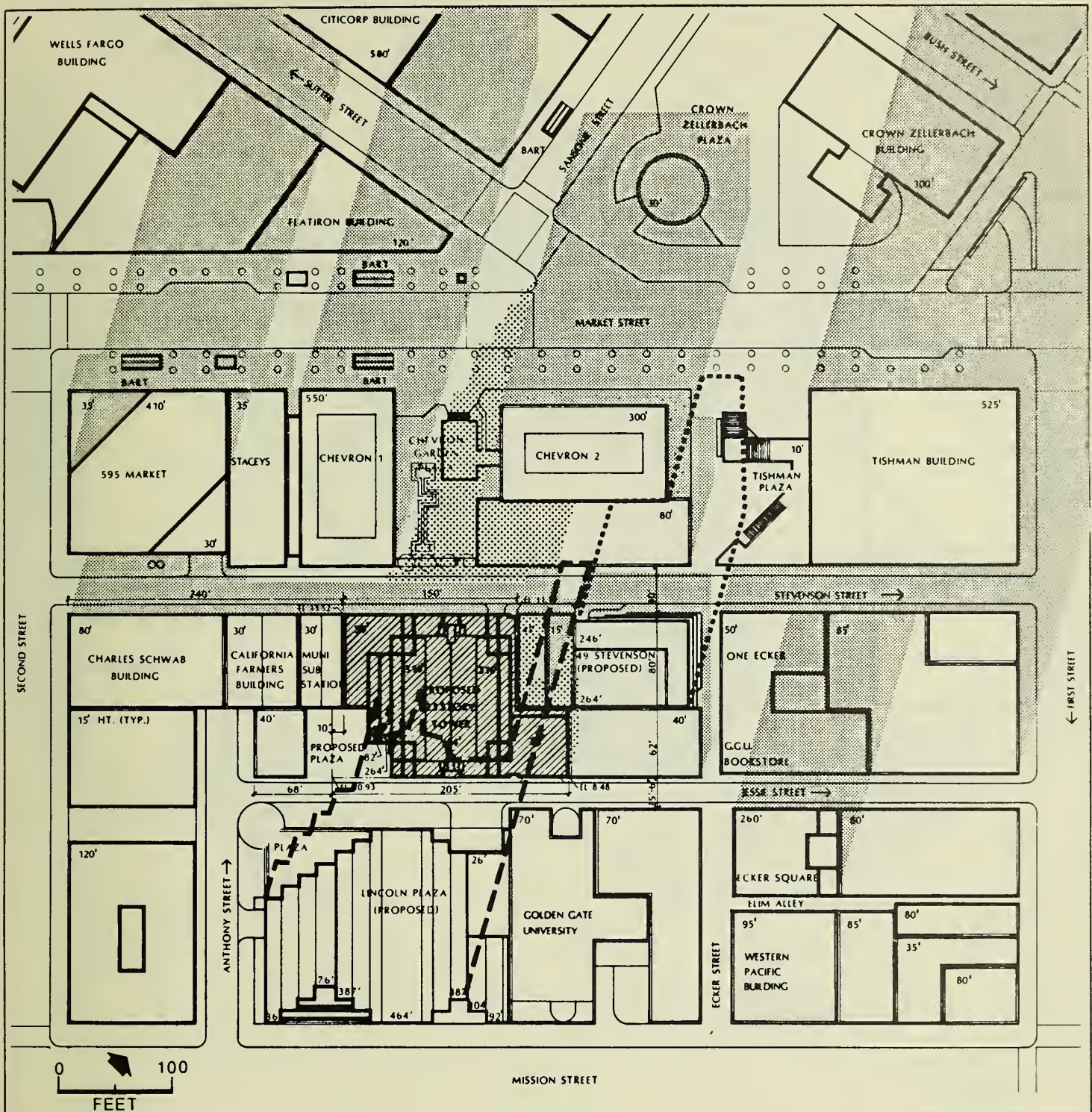
--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● **FIGURE 45:**  
Alternative E Shadow Patterns -  
March 10 A.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

— — — Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

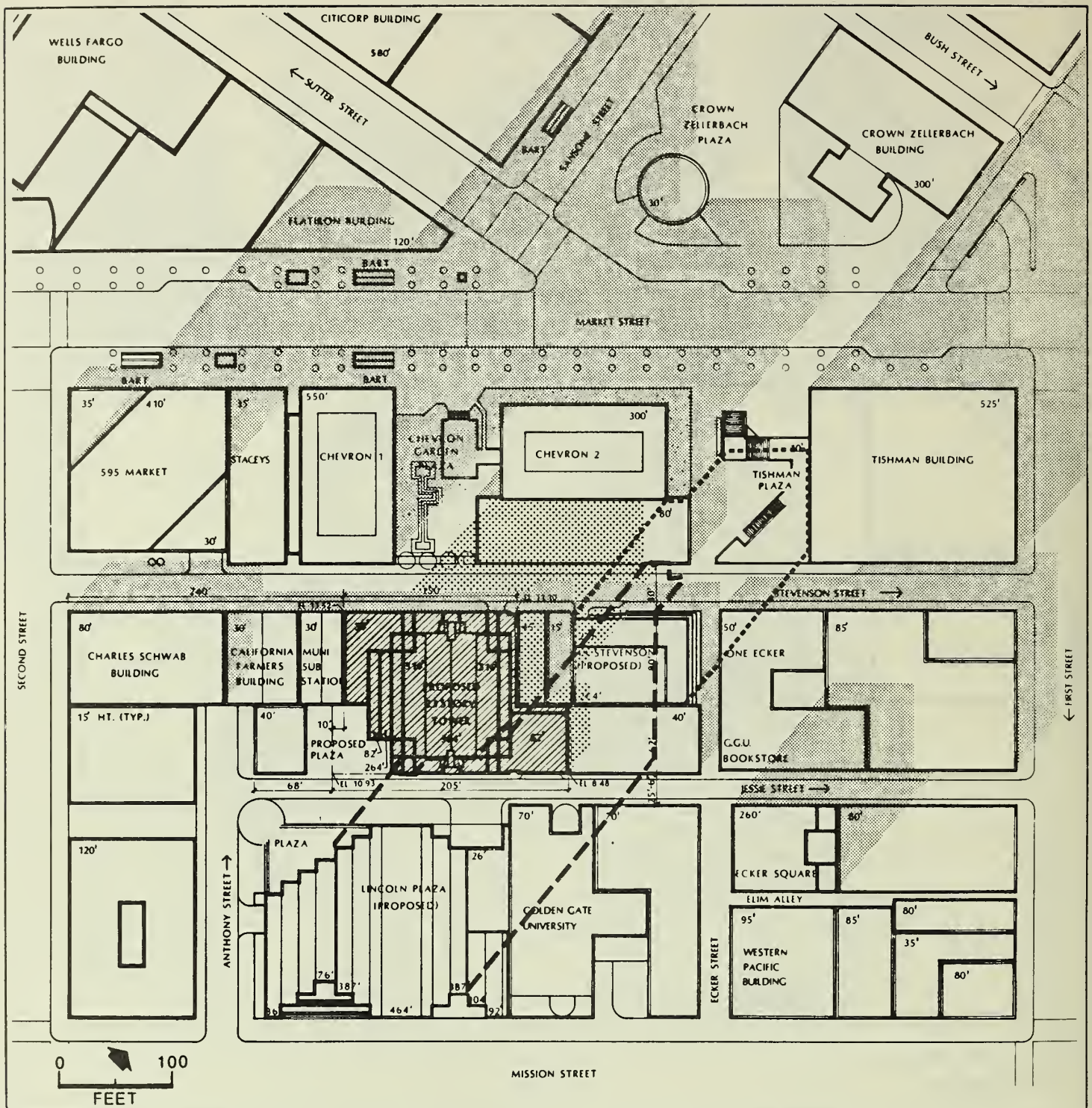
## ● FIGURE 46:

Alternative E Shadow Patterns -  
March 11 A.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz

SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project



Existing Shadow



New Shadow from Project

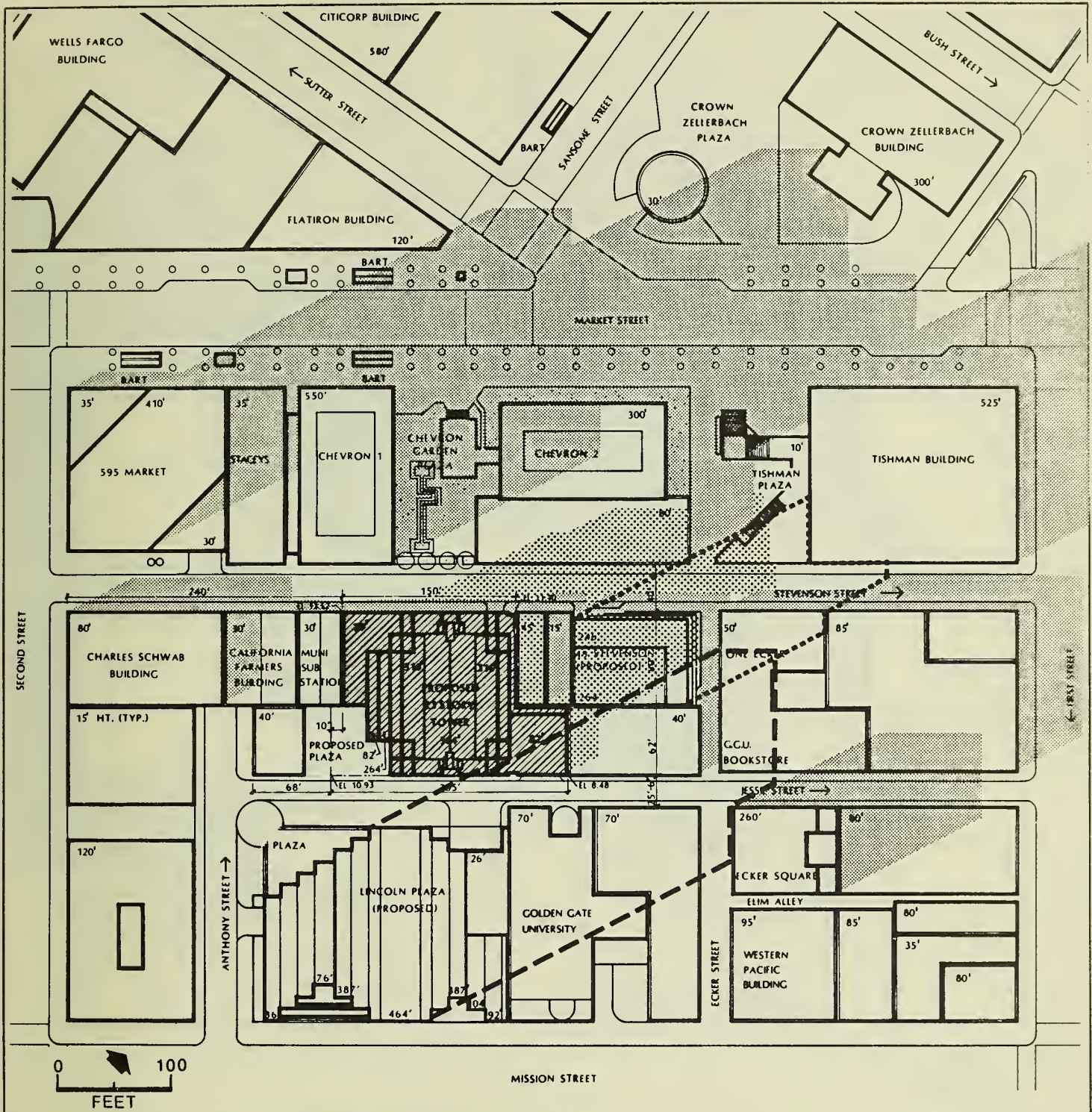
--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● FIGURE 47:  
Alternative E Shadow Patterns -  
March Noon P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

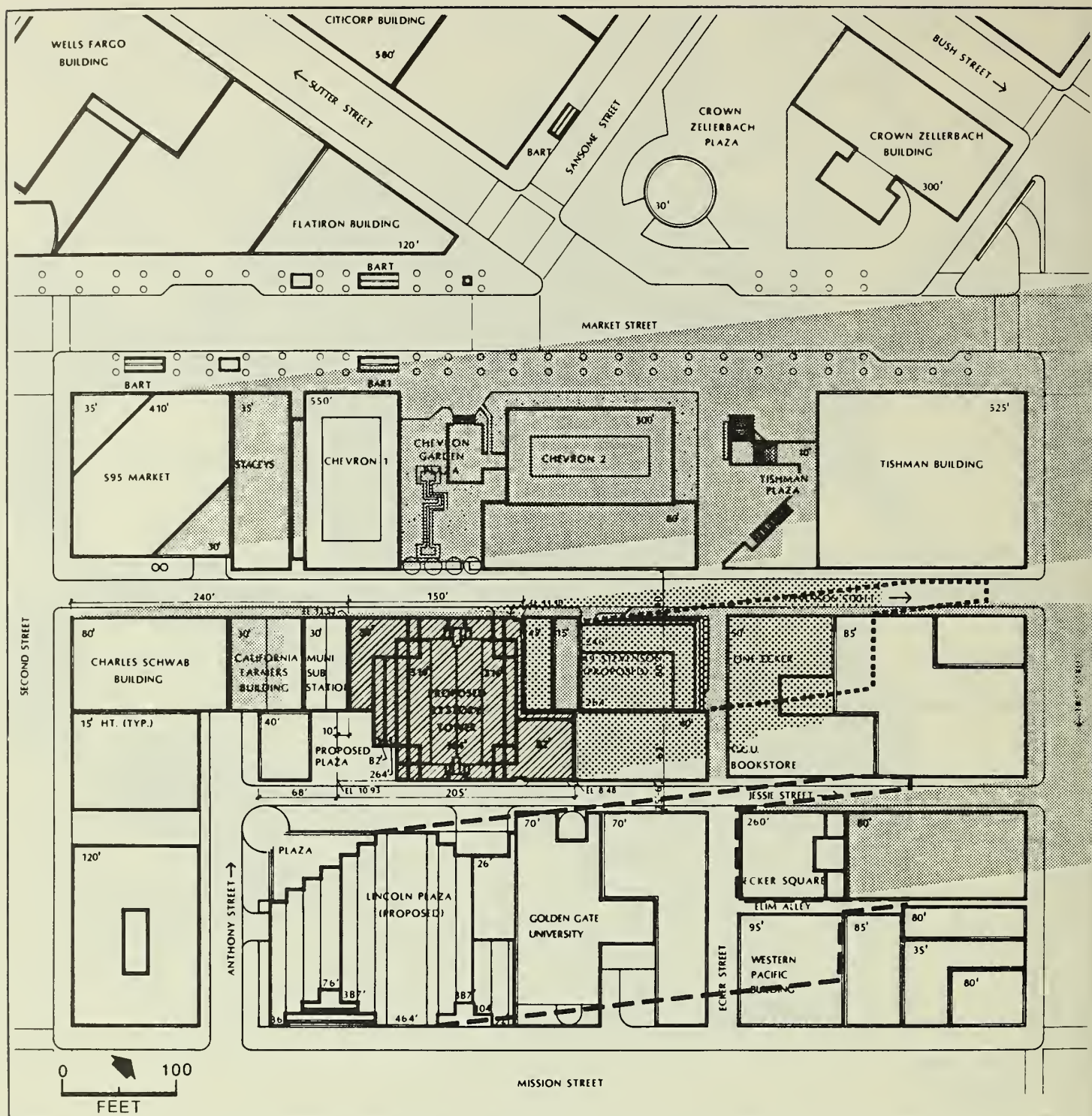
## ● FIGURE 48:

Alternative E Shadow Patterns -  
March 1 P.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz

SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project



Existing Shadow



New Shadow from Project

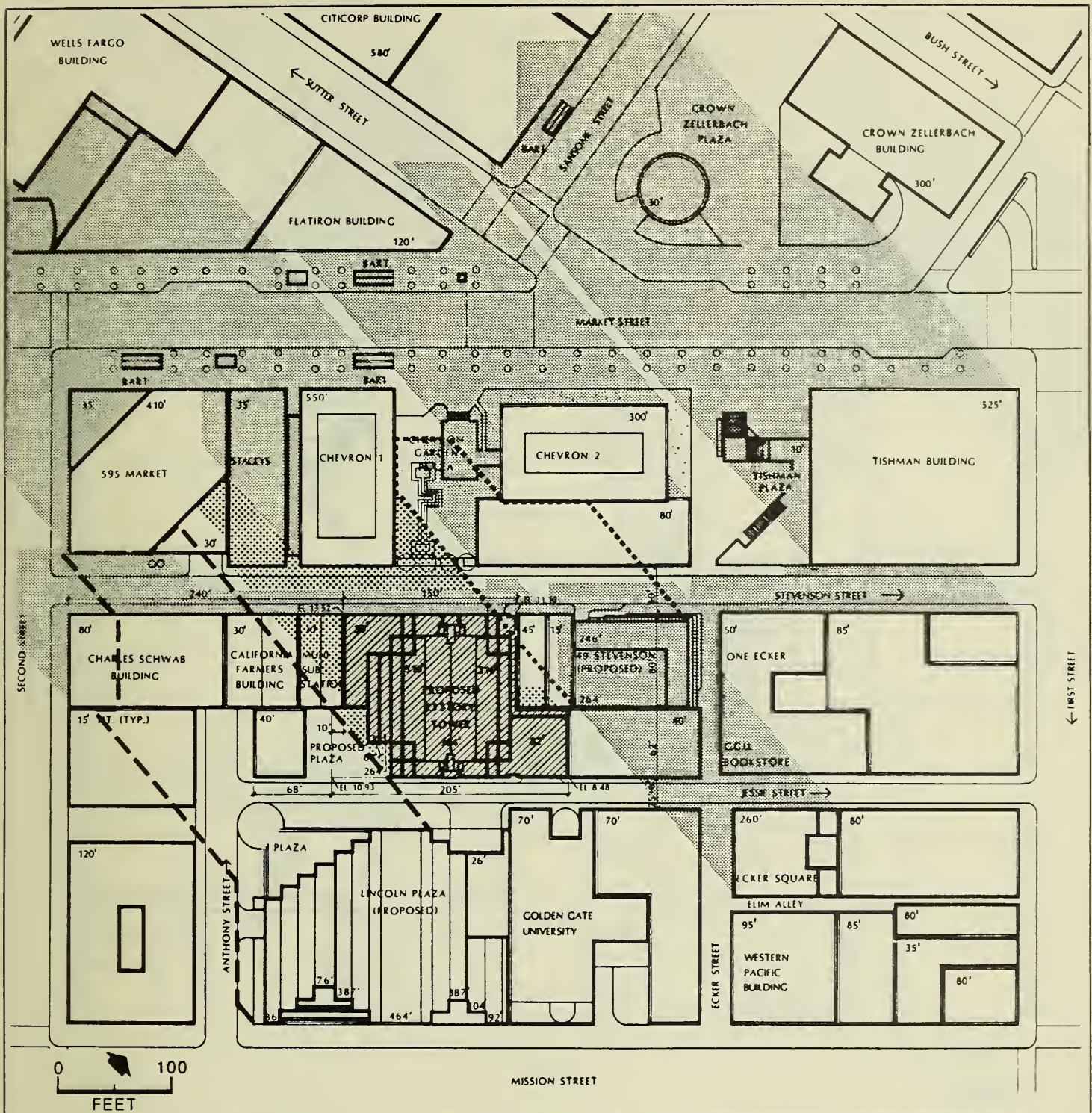
--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● **FIGURE 49:**  
Alternative E Shadow Patterns -  
March 2 P.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

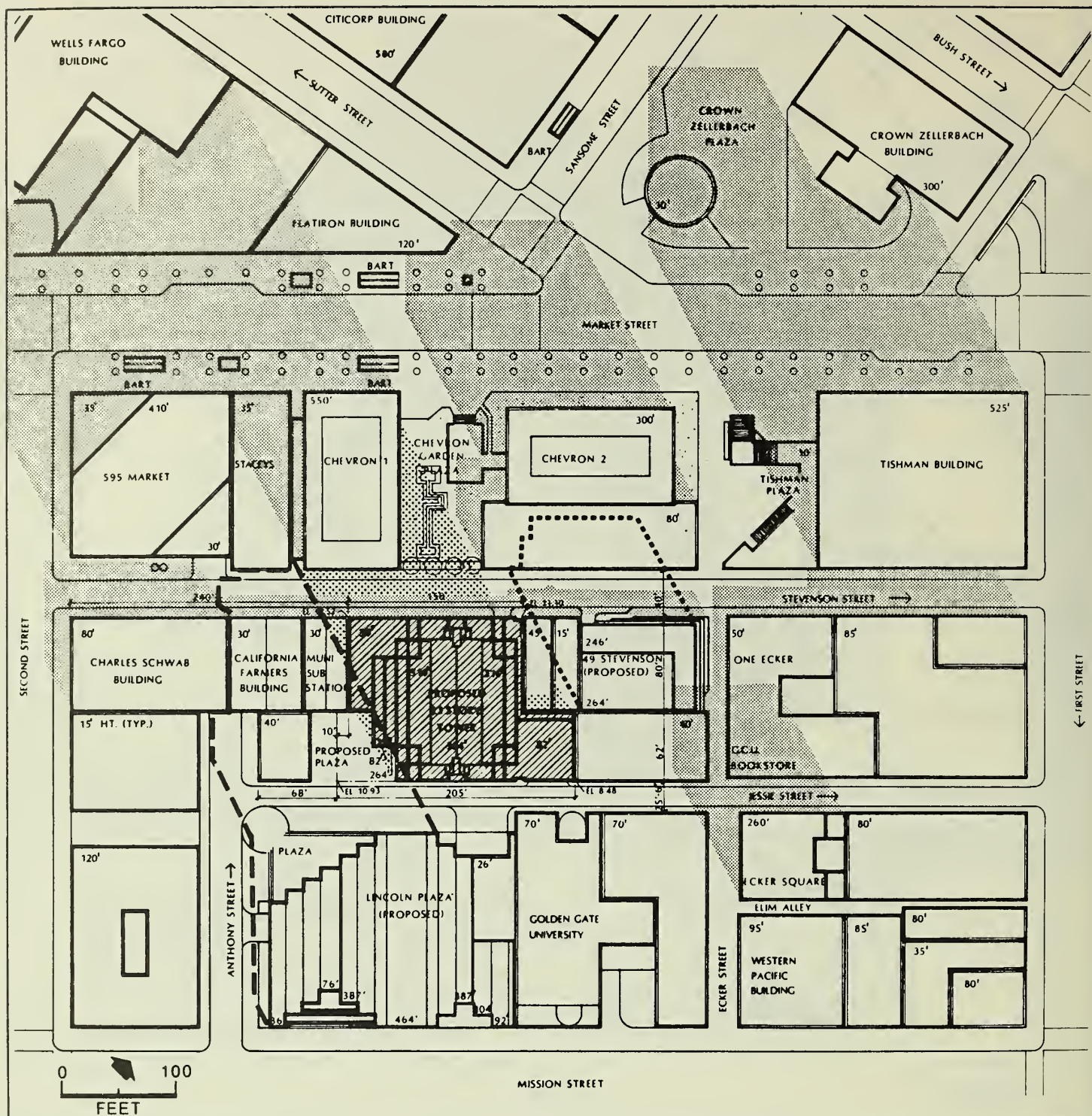
## ● FIGURE 50:

Alternative E Shadow Patterns -  
June 10 A.M. P.D.T.

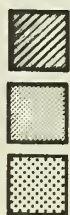
BASE MAP SOURCE: Kaplan/McLaughlin/Diaz

SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

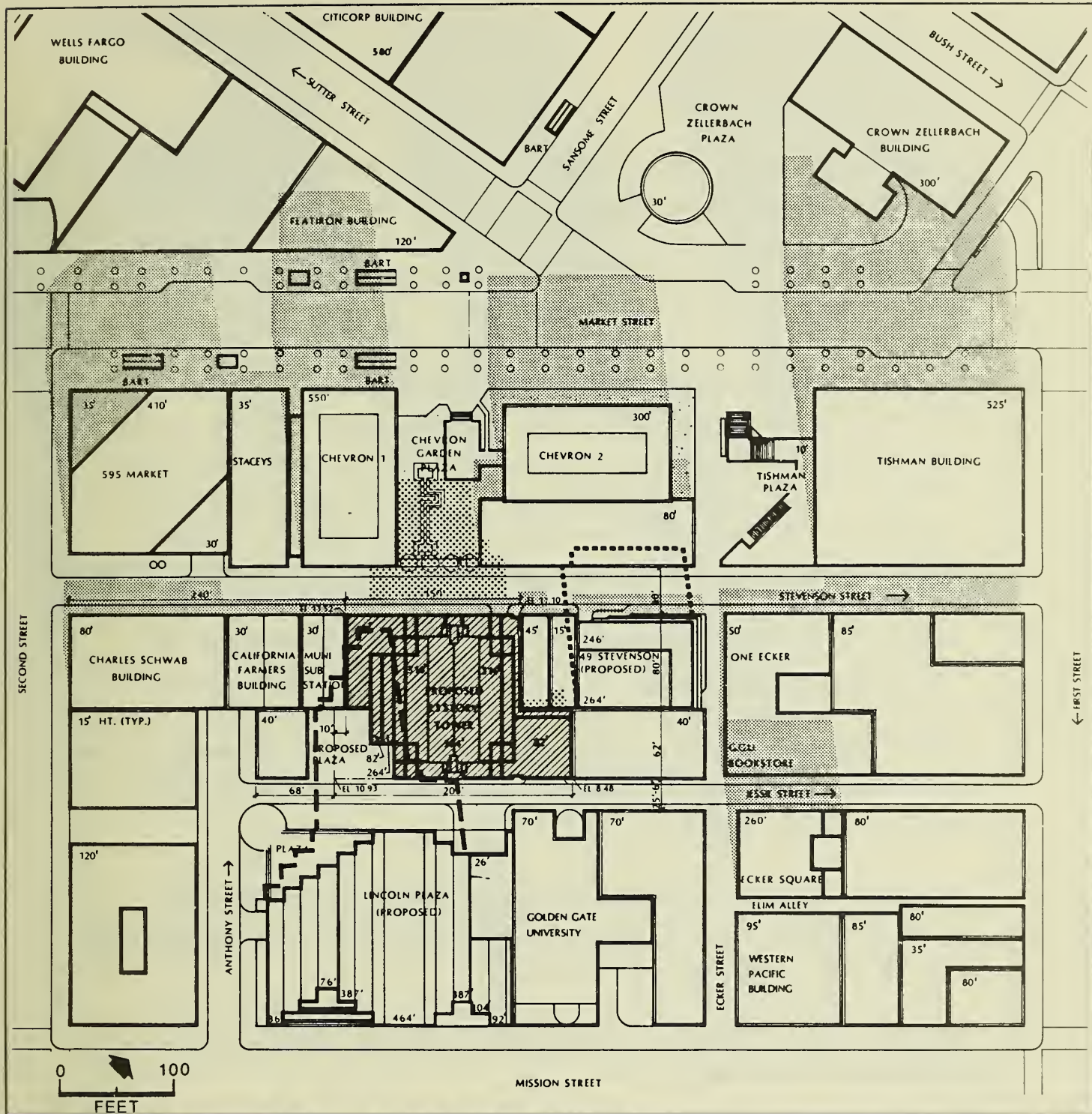
— — — Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

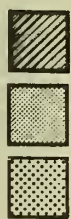
● FIGURE 51:  
Alternative E Shadow Patterns -  
June 11 A.M. P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project

Existing Shadow

New Shadow from Project

— — — Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

## ● FIGURE 52:

Alternative E Shadow Patterns -  
June Noon P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz

SHADOW INFORMATION: Environmental Science  
Associates, Inc.

## VIII. Summary of Comments and Responses

### "Fall (Daylight Saving Time)

"At 10 a.m., the building would shade about half of the Chevron Garden Plaza. Shadows would not extend past the Chevron 1 Tower (see Figure 53, p. 353). At 10 a.m., the building would cast new shadow across about two-thirds of the Chevron Garden Plaza, with the shadow extending as a narrow strip to the north side of Market St.

"At 11 a.m., the building would shade the Chevron Garden Plaza and a portion of Market St., including both sidewalks (see Figure 54, p. 354). The Alternative's Jessie St. plaza would be shaded by the Lincoln Plaza building. However, sunlight would reach portions of the area proposed to be paved that are not located on the project site; that is, the Muni driveway, Jessie St. itself, and a portion of the Lincoln Plaza open space.

"At noon, the alternative would shade a little less than half of the Chevron Garden Plaza and the northerly Stevenson St. sidewalk (see Figure 55, p. 355). The Alternative's Jessie St. plaza would be largely free of shadows. At 1 p.m., the alternative would shade Stevenson St. and the northerly sidewalk (see Figure 56, p. 356). The Jessie St. plaza would be free of shadows.

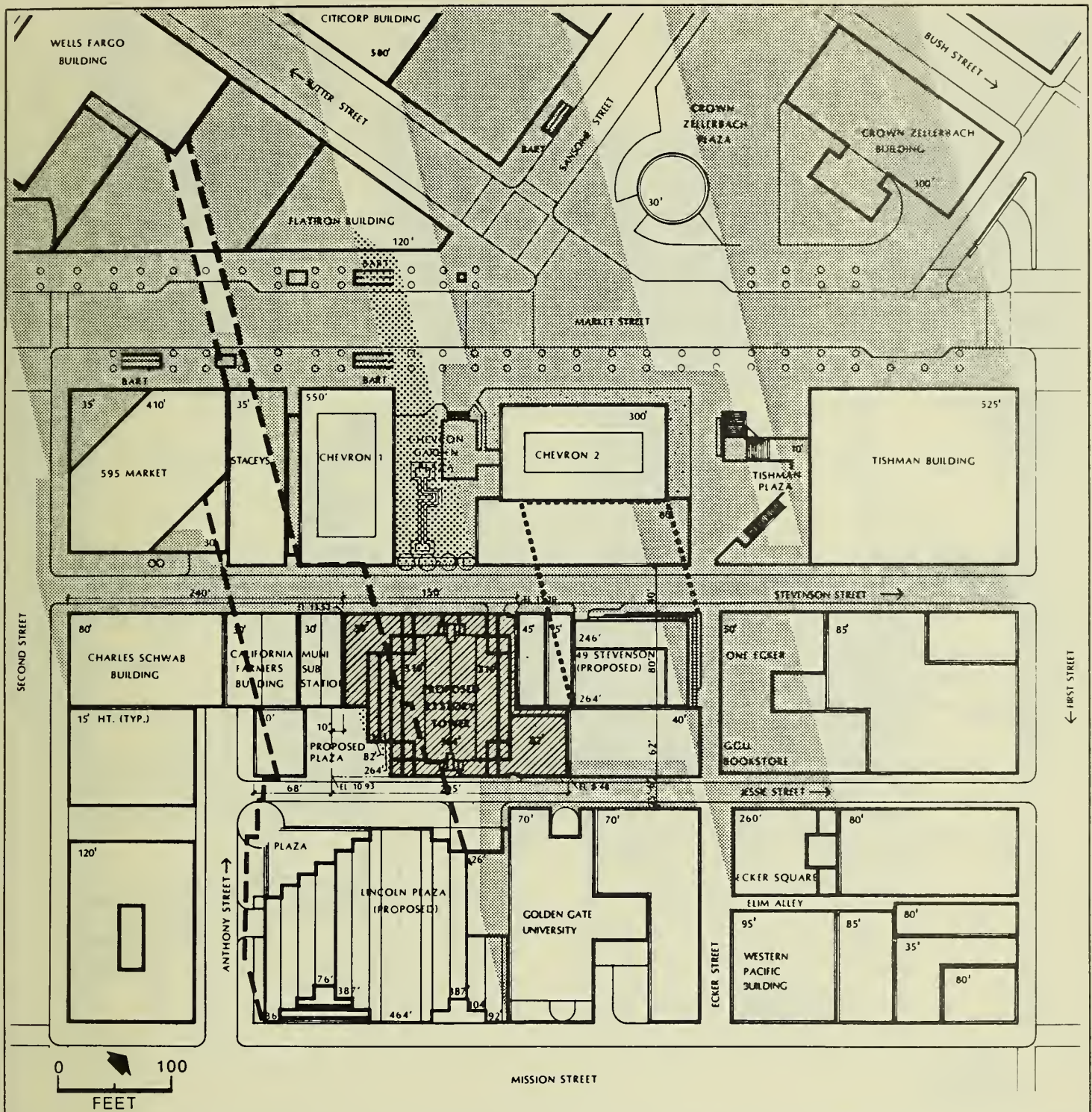
"At 2 p.m., the alternative would shade Stevenson St. including the northerly sidewalk, and a portion of the Tishman building's elevated deck over the plaza (see Figure 57, p. 357).

"Winter: Winter shadows are the longest of the year because of the sun's low position in the sky.

"At 10 a.m., the building would shade about two-thirds of the Chevron Garden Plaza (see Figure 58, p. 359). The shadow would extend across Market St to Bush St. The Alternative's Jessie St. plaza would be shaded by the Lincoln Plaza building.

"At 11 a.m., the building would shade the southeasterly corner of the Chevron Garden Plaza and rooftops. The Jessie St. plaza would be partially shaded by surrounding buildings (see Figure 59, p. 360).





## LEGEND



Project

Existing Shadow

New Shadow from Project

--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

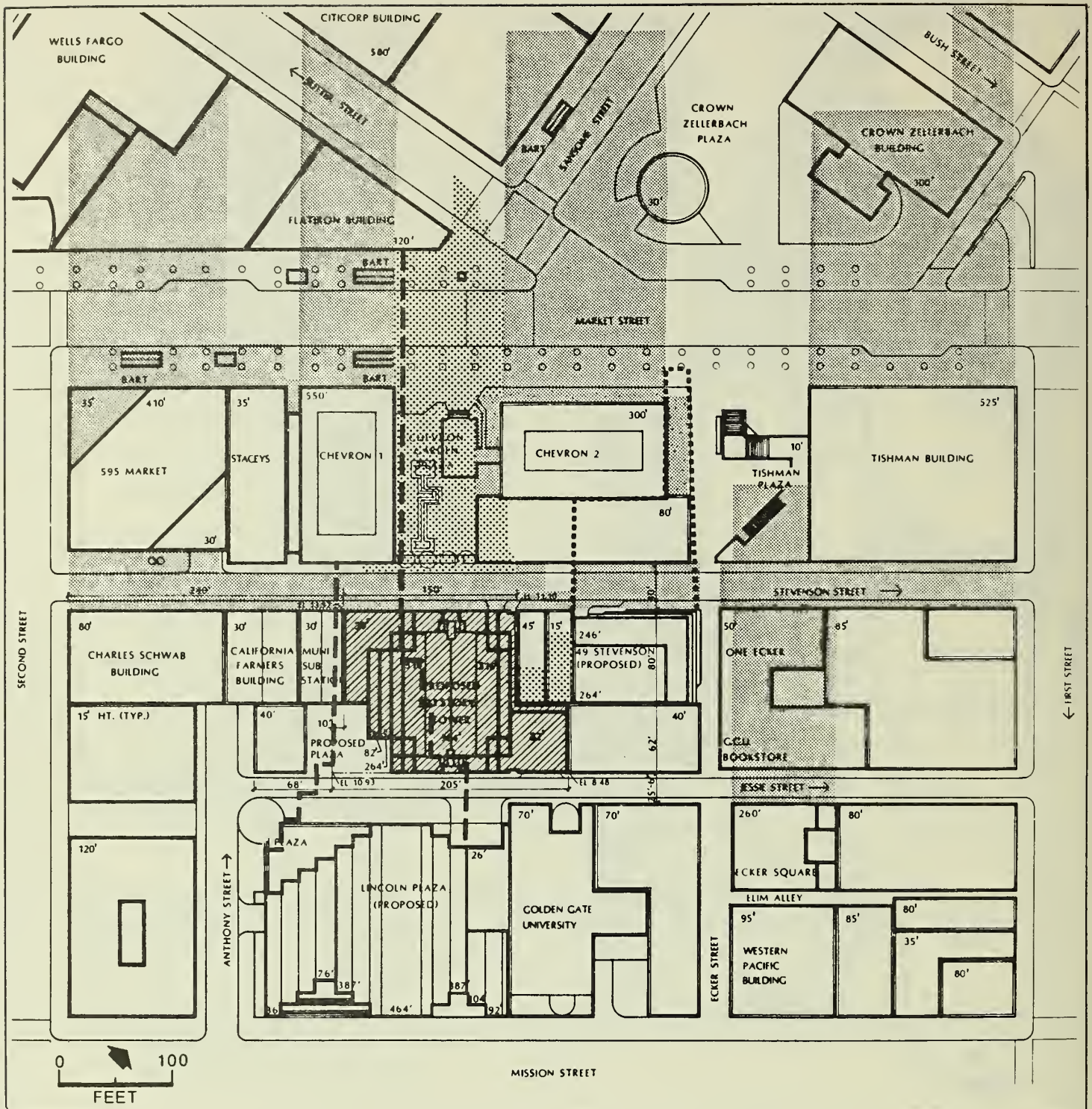
## ● FIGURE 53:

Alternative E Shadow Patterns -  
September 10 A.M. P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz

SHADOW INFORMATION: Environmental Science  
Associates, Inc.

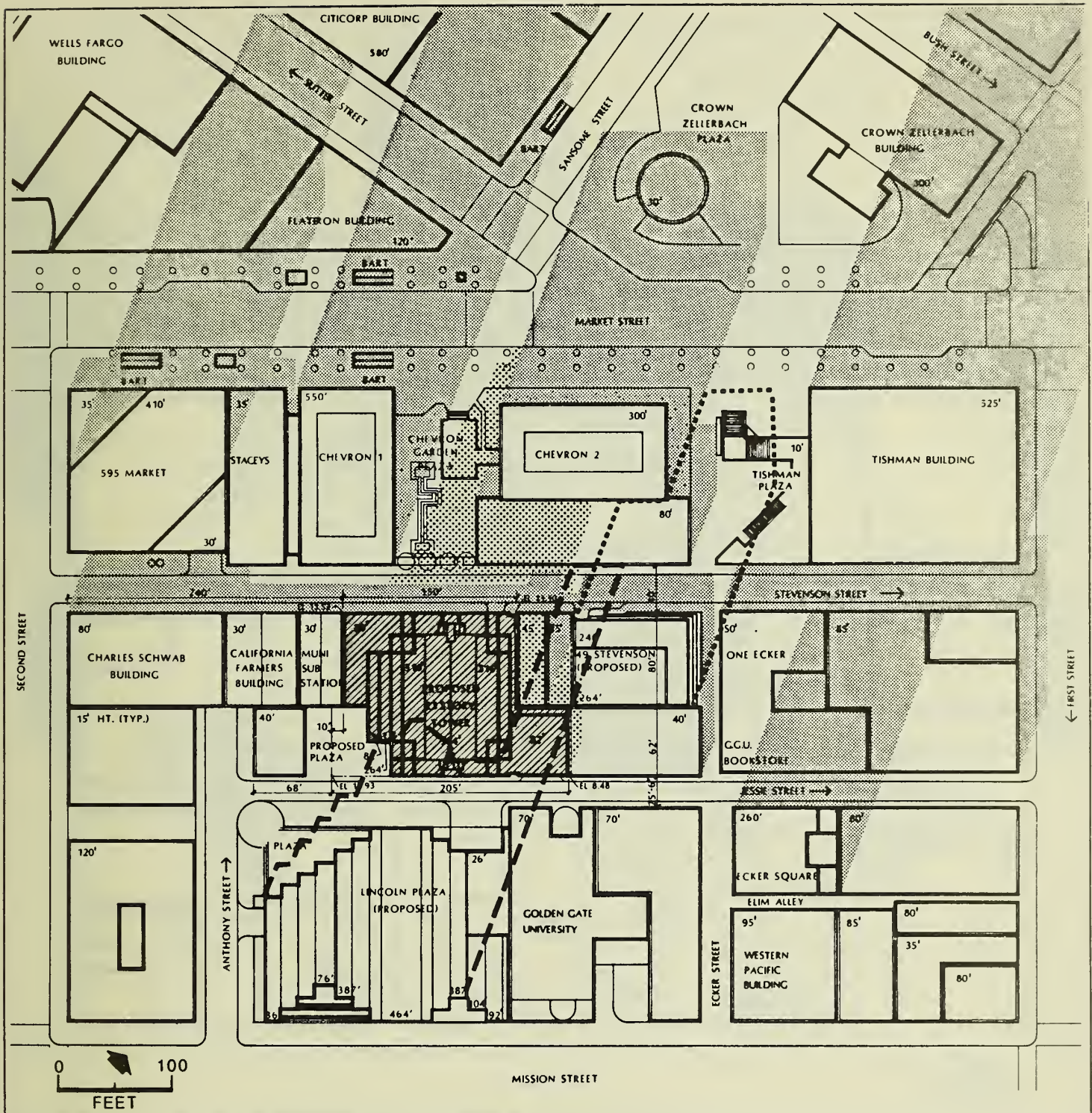




● FIGURE 54:  
Alternative E Shadow Patterns -  
September 11 A.M. P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project



Existing Shadow



New Shadow from Project

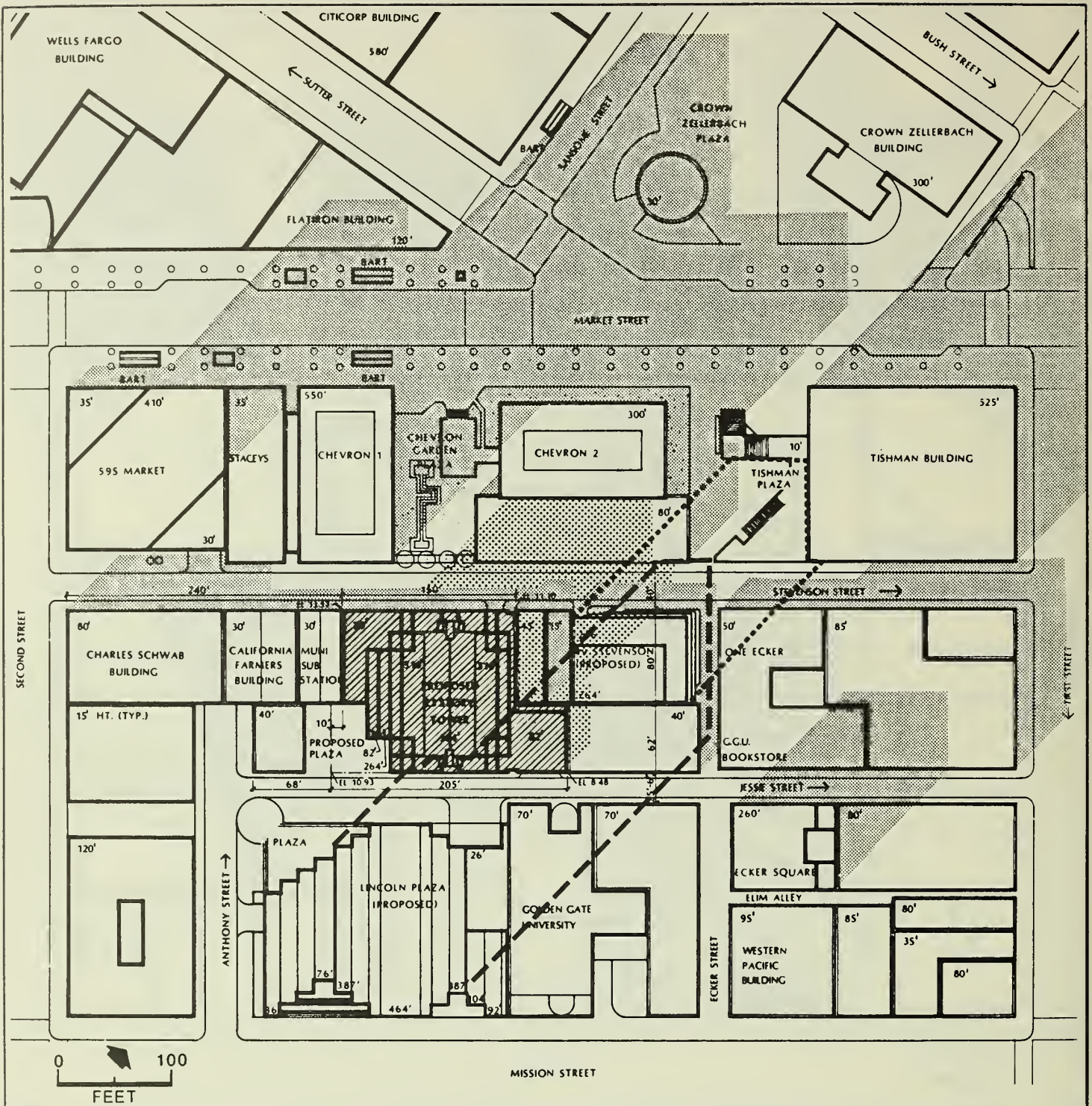
--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

● **FIGURE 55:**  
Alternative E Shadow Patterns -  
September Noon P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project



Existing Shadow



New Shadow from Project

--- Extent of Proposed Lincoln Plaza Shadow

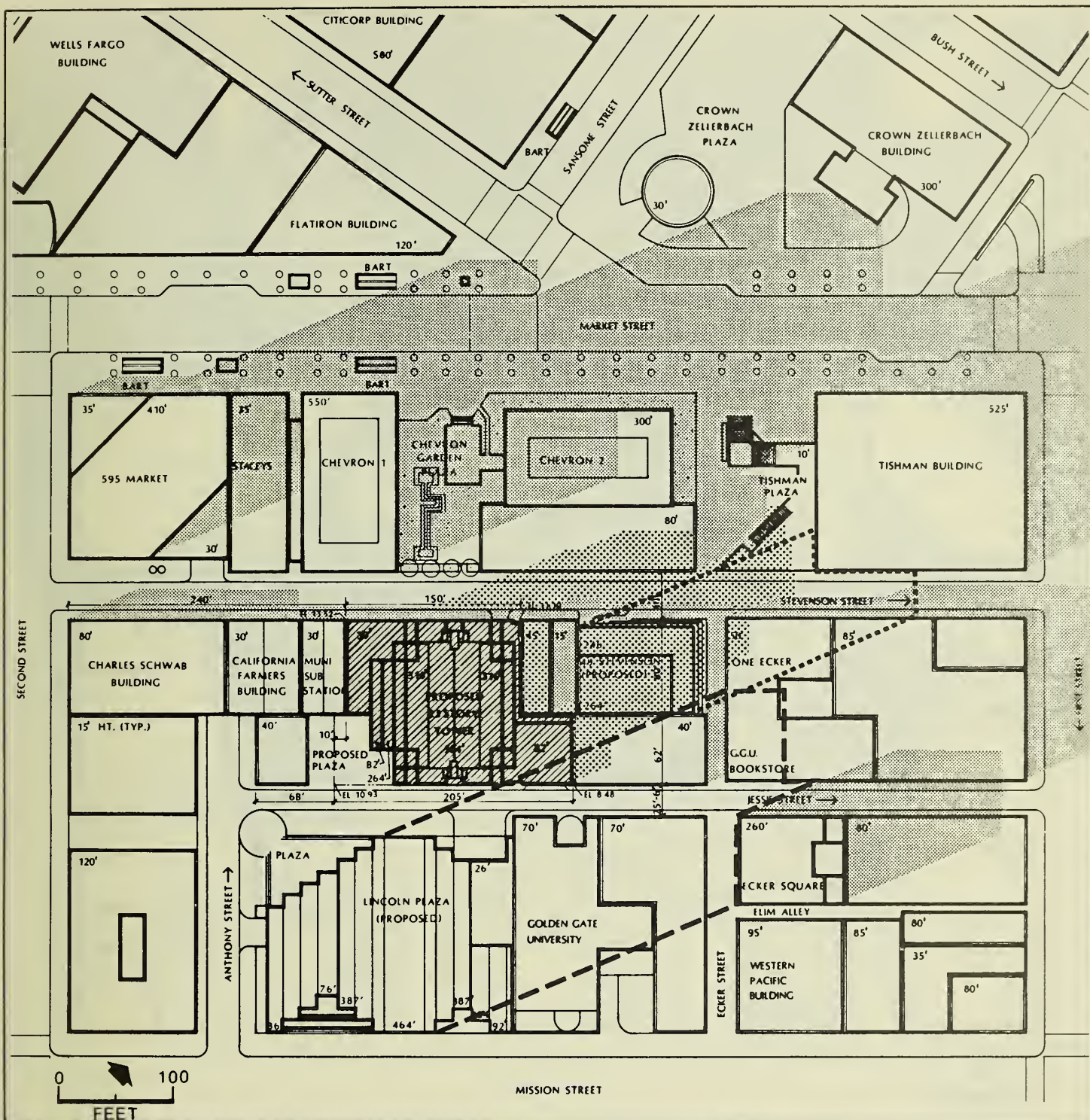
..... Extent of Proposed 49 Stevenson Shadow

● **FIGURE 56:**  
Alternative E Shadow Patterns -  
September 1 P.M. P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz

SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## LEGEND



Project



Existing Shadow



New Shadow from Project

--- Extent of Proposed Lincoln Plaza Shadow

..... Extent of Proposed 49 Stevenson Shadow

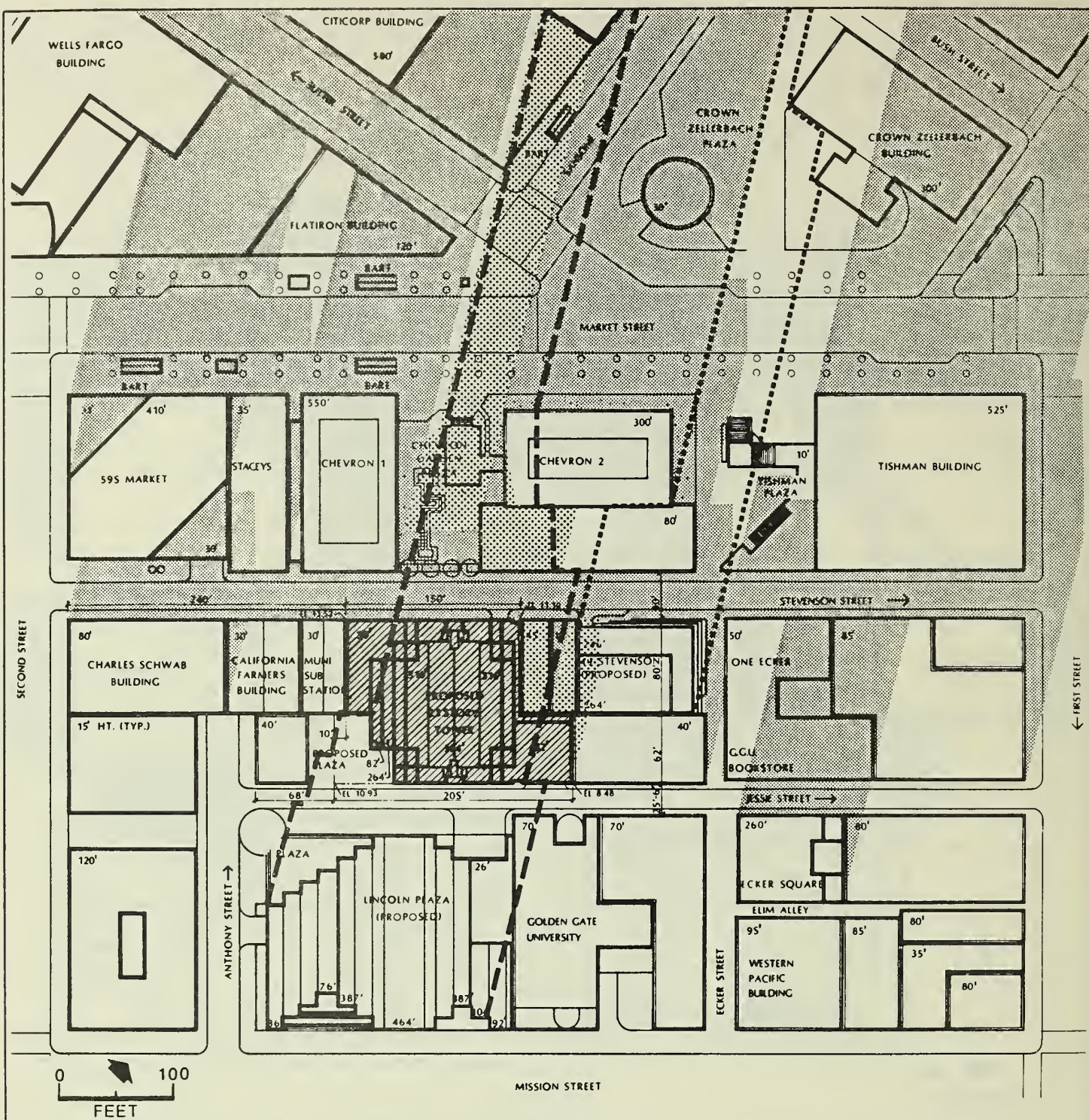
## FIGURE 57:

Alternative E Shadow Patterns -  
September 2 P.M. P.D.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz

SHADOW INFORMATION: Environmental Science  
Associates, Inc.

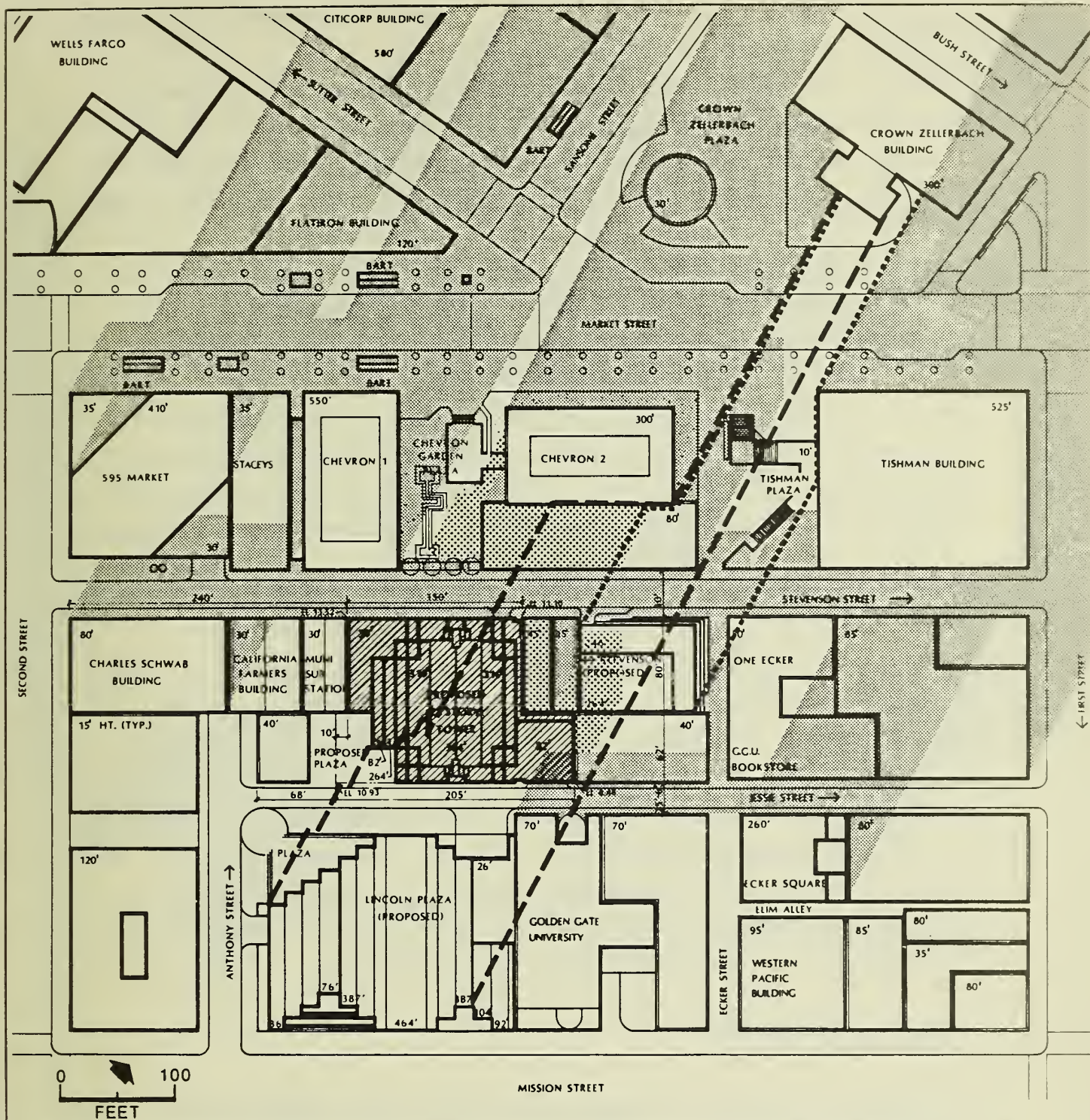




● FIGURE 58:  
Alternative E Shadow Patterns -  
December 10 A.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





● FIGURE 59:  
Alternative E Shadow Patterns -  
December 11 A.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.



"At noon, the building would shade primarily rooftops, with a slender projection reaching from the southerly Market St. sidewalk to the sunken driveway into the Crown Zellerbach building basement parking garage (see Figure 60, p. 362). The Alternative's Jessie St. plaza would be in shadow.

"At 1 p.m., in addition to shading roofs, the building would shade the southerly half of the Tishman building's deck (see Figure 61, p. 363). The Jessie St. plaza would be in shadow.

"At 2 p.m., the building would cast shadows over about a quarter of the Tishman building's elevated platform, and the northerly Stevenson St. sidewalk (see Figure 62, p. 364). The Jessie St. plaza would be mostly shaded by an existing building adjacent to the Muni substation driveway.

#### "WIND

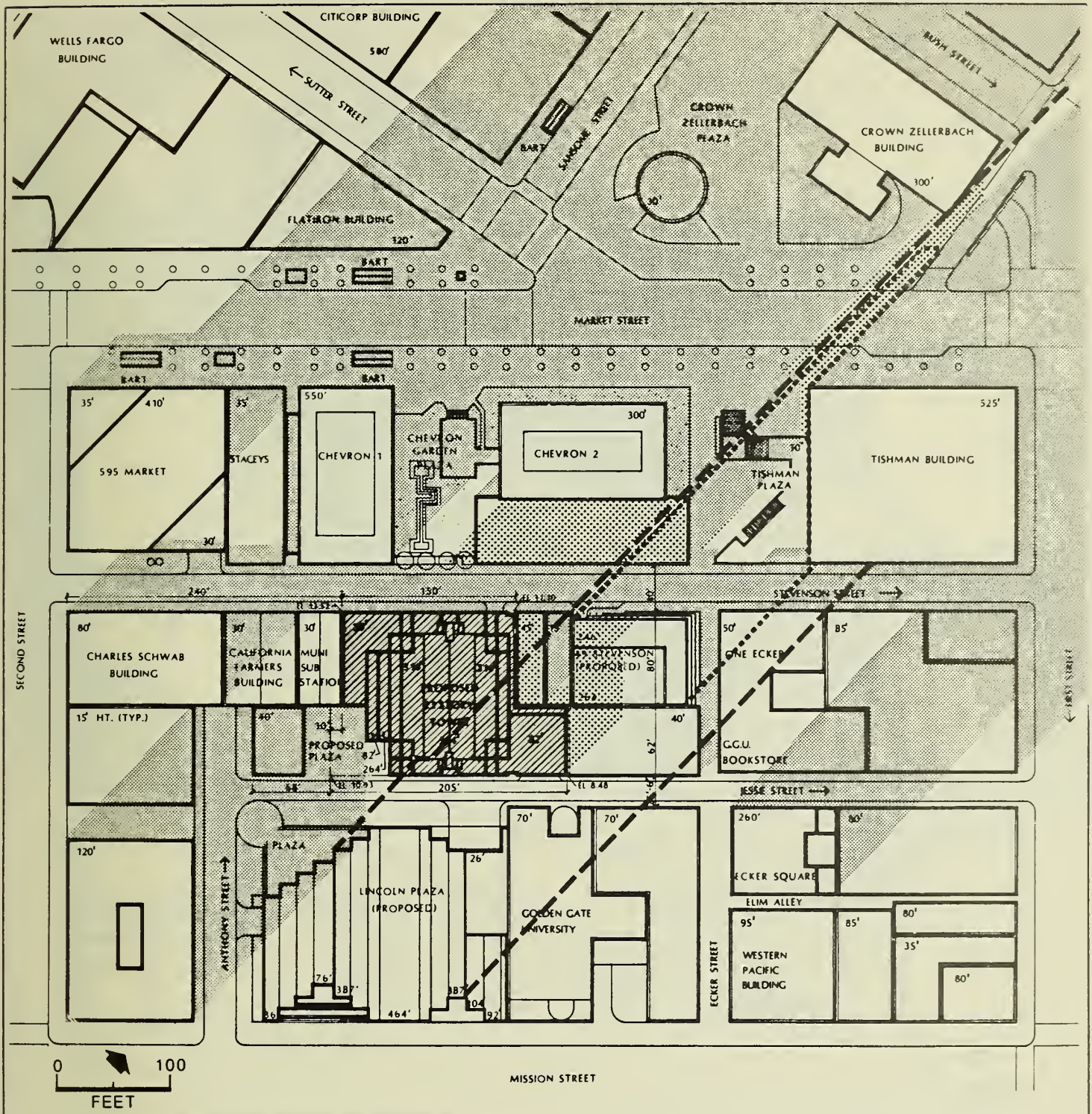
"Wind tunnel testing was conducted for Alternative E. Several different scenarios were tested, those relevant to this discussion being: the existing setting (to establish the base case); Alternative E with the Lincoln Plaza and 49 Stevenson developments (with designs as proposed at the time of the test); the Alternative with 49 Stevenson; the Alternative with Lincoln Plaza; and the Alternative alone. The complete text of the report (Dr. Bruce White, March 1983, Wind Tunnel Studies of the 71 Stevenson St. Project) is available for public review at the Office of Environmental Review, 450 McAllister St., 5th Floor.

#### "Pedestrian Discomfort

"Information on comfort of pedestrians under various conditions (e.g., sun exposure, cool and warm temperatures, light and heavy clothing, and various wind speeds) is provided by Lawson and Penwarden (1976).

Penwarden (1973) suggests degrees of discomfort that are created by various wind speeds. For winds up to 4 miles per hour (mph), there is no pedestrian discomfort; for winds from 4 to 8 mph, wind is felt on the face. Winds from 8 to 13 mph will disturb hair, will flap clothing, and

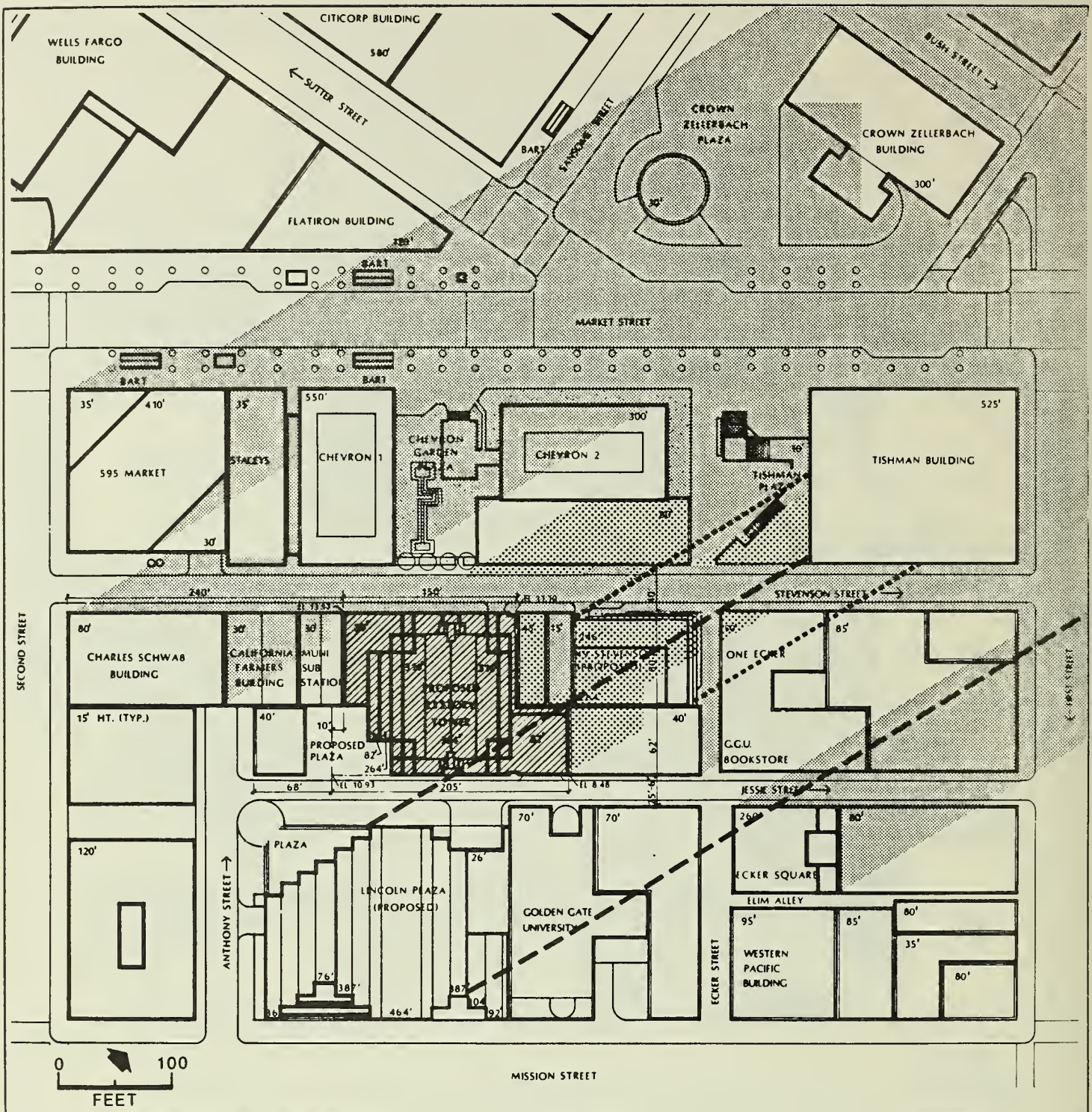




● **FIGURE 60:**  
Alternative E Shadow Patterns -  
December Noon P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





● **FIGURE 61:**  
Alternative E Shadow Patterns -  
December 1 P.M. P.S.T.

BASE MAP SOURCE: Kaplan/McLaughlin/Diaz  
SHADOW INFORMATION: Environmental Science  
Associates, Inc.





## VIII. Summary of Comments and Responses

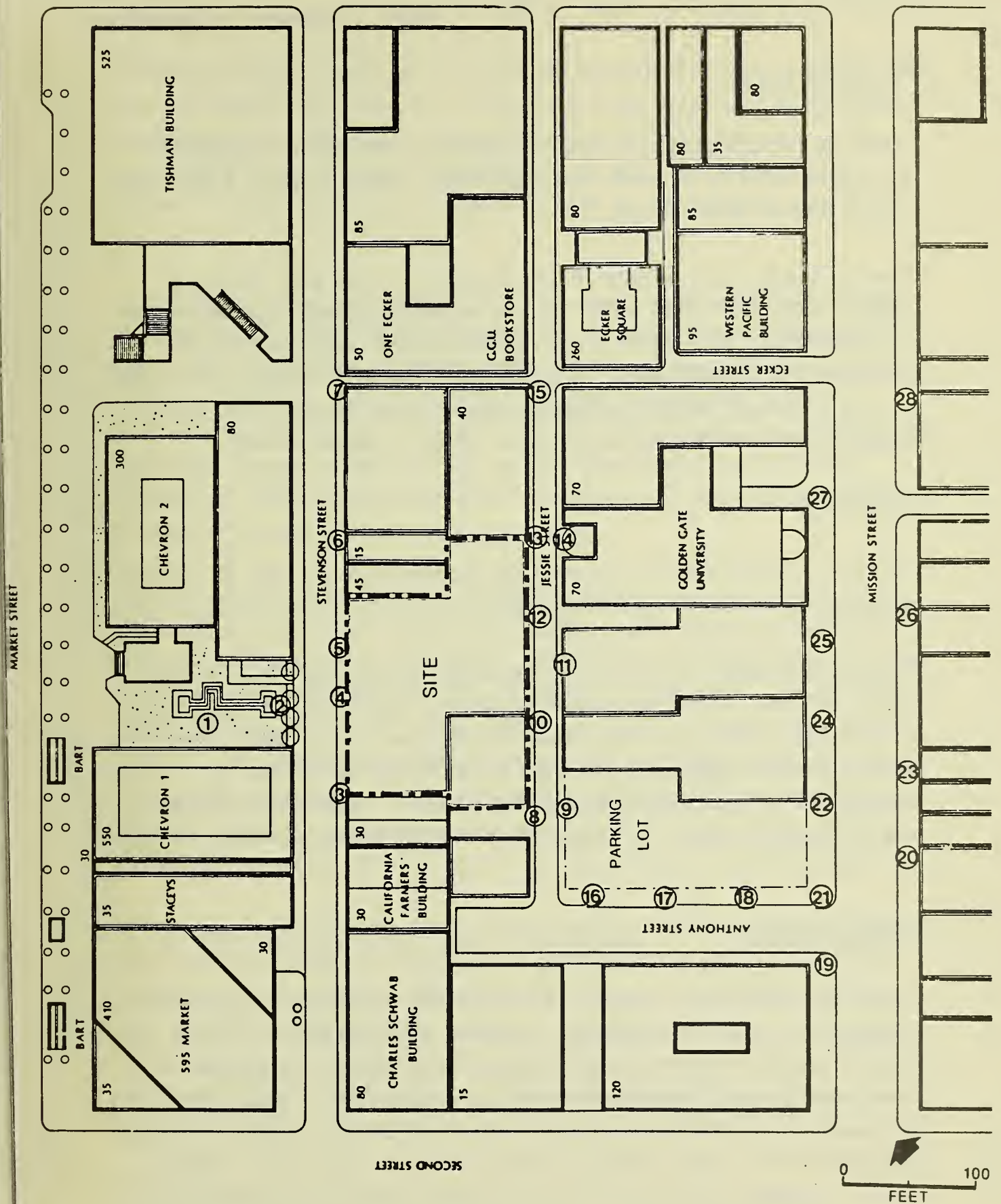
will extend a light flag mounted on a pole. Winds from 13 to 19 mph will raise dust, dry soil and loose paper, and disarrange hair. For winds from 19 to 26 mph, the force of the wind will be felt on the body. At 26 mph the limit of agreeable wind on land is defined. From 26 to 34 mph winds, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 mph increase difficulty with balance and can blow people over by gusts.

"In view of the above information, a mean windspeed of 11 mph was selected as the comfort criterion and 25 mph as a hazard criterion. Results are reported in terms of ground-level windspeeds on summer afternoons at 4 p.m., generally the windiest time of the year. Hazard wind speeds were not encountered during the course of the study, and the comfort criterion was rarely exceeded.

"The measured wind-tunnel wind speeds are presented as mph in this report; thus, for the wind speeds given in mph, 11 would represent 11 mph, which corresponds to the comfort criterion.

"Experiments were performed for 3 prevailing wind directions (westerly, northwesterly and southwesterly) for all tested scenarios. The annual frequencies measured at BAAQMD offices for each of the prevailing winds are as follows: northwest, 4%; west, 51%, southwest, 14%. These wind directions are the most common in San Francisco, and are therefore the most representative for evaluation purposes. In the wind tunnel, all hot-wire measurements were taken at the same series of surface points around the building site for all 3 wind directions and scenarios (see Figure 63, p. 366). Figures 64-73, pp. 369-376 and 379-380, represent the worst case wind speed impacts, which all occur under southwest winds. As discussed below, impacts under northwest and westerly winds are not substantial. Measured windspeed diagrams for these two wind directions are available for public review at the Office of Environmental Review, 450 McAllister St.





● FIGURE 63: Location of Hot Wire Anemometer Measurements

SOURCE: Dr. Bruce White

"Northwest Winds

"Existing surface winds are below the comfort criterion of 11 mph, with the strong majority of winds less than 5 mph. Winds of about 8 mph occur in the Chevron Garden Plaza.

"Similar surface wind speeds of 1 to 7 mph (i.e., all well below the comfort criterion) would occur for the tested scenarios; Alternative E or any combinations of Lincoln Plaza and 49 Stevenson would have little effect on the surface winds. This result is due most likely to the large mass of buildings (mostly highrises) upwind of the project site, which increase wind-friction resistance, thus reducing surface winds.

"West Winds

"Existing surface winds at the existing setting at 2 to 5 mph all are well below the comfort criterion of 11 mph.

"The surface winds in all the configurations tested would be less than 6 mph, also well below the comfort criterion. There would be an increase of wind speeds on Jessie St. between Alternative E and Lincoln Plaza for some of the configurations. However as previously mentioned, the resultant wind speeds would be less than 6 mph. These lower wind speeds are probably due, again, to the large mass of highrise buildings upwind of the project site.

"Southwest Winds

"The area upwind of the project block currently contains few substantial buildings or sizable topographical features that would tend to alter the wind direction or retard the wind speed. As a result, the southwesterly winds have an unobstructed pathway to the project site. Additionally, the southwesterly wind direction nearly aligns with Market, Stevenson Jessie and Mission Sts., thus furrowing winds unhindered along these streets.



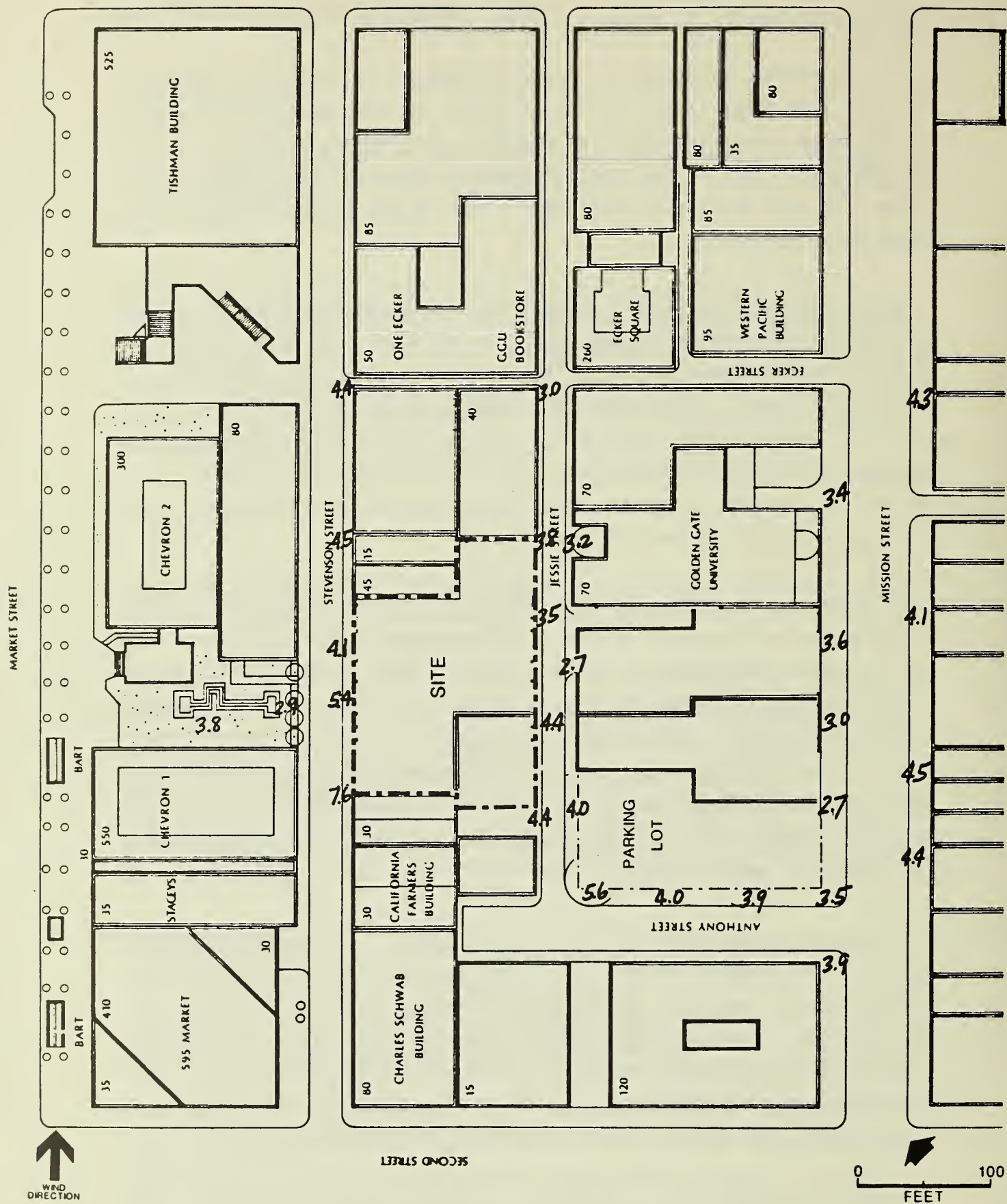
"Existing surface winds are all below the comfort criterion of 11 mph (all are less than 5 mph except for 7.6 and a 5.4 mph wind speed measurements on Stevenson and Jessie Sts., respectively, see Figures 64-65, pp. 369-370). Each of the configurations is discussed individually below. In each discussion reference is made to the existing setting for comparative purposes.

"71 Stevenson (Alternative E) Alone: All wind speeds would be less than the comfort criterion of 11 mph except on the south side of Jessie St. across from the middle of the 71 Stevenson site, where the wind speed would be 11.8 mph. "There would be effective increases to 7-8 mph, 8-12 mph, and 6-8 mph from 4-5 mph, 3-4 mph, and 3-4 mph, respectively, on Stevenson, Jessie and Mission Sts. (see Figures 66-67, pp. 371-372). Anthony St. and Chevron Garden Plaza winds would be approximately the same as those occurring in the existing setting.

"71 Stevenson (Alternative E) with Lincoln Plaza: Winds adjacent to the 71 Stevenson and Lincoln Plaza sites on Stevenson, Jessie and Mission Sts. would double to quadruple in speed. Winds in these areas would exceed the 11 mph comfort criterion (see Figures 68-69, pp. 373-374). There would be effective increases to 10-11 mph, 12-15 mph, and 11-16 mph from 4-5 mph, 3-4 mph, and 3-4 mph, respectively, on Stevenson, Jessie and Mission Sts. This result is probably due to a channeling of winds between the buildings on these streets, thus accelerating wind speeds near the surface. Winds on Anthony St. would increase to 5-6 mph from 4-5 mph.

"71 Stevenson (Alternative E) with 49 Stevenson: All wind speeds would be less than the comfort criterion of 11 mph except for wind on Jessie St. adjacent to 71 Stevenson, which would be 11.6 mph (see Figures 70-71, pp. 375-376). There would be effective increases to 4-7 mph, 8-12 mph, and 3-7 mph from 4-5 mph, 3-4 mph, and 3-4 mph, respectively, on Stevenson, Jessie and Mission Sts. Winds on Anthony St. would remain approximately the same as those occurring in the existing setting.

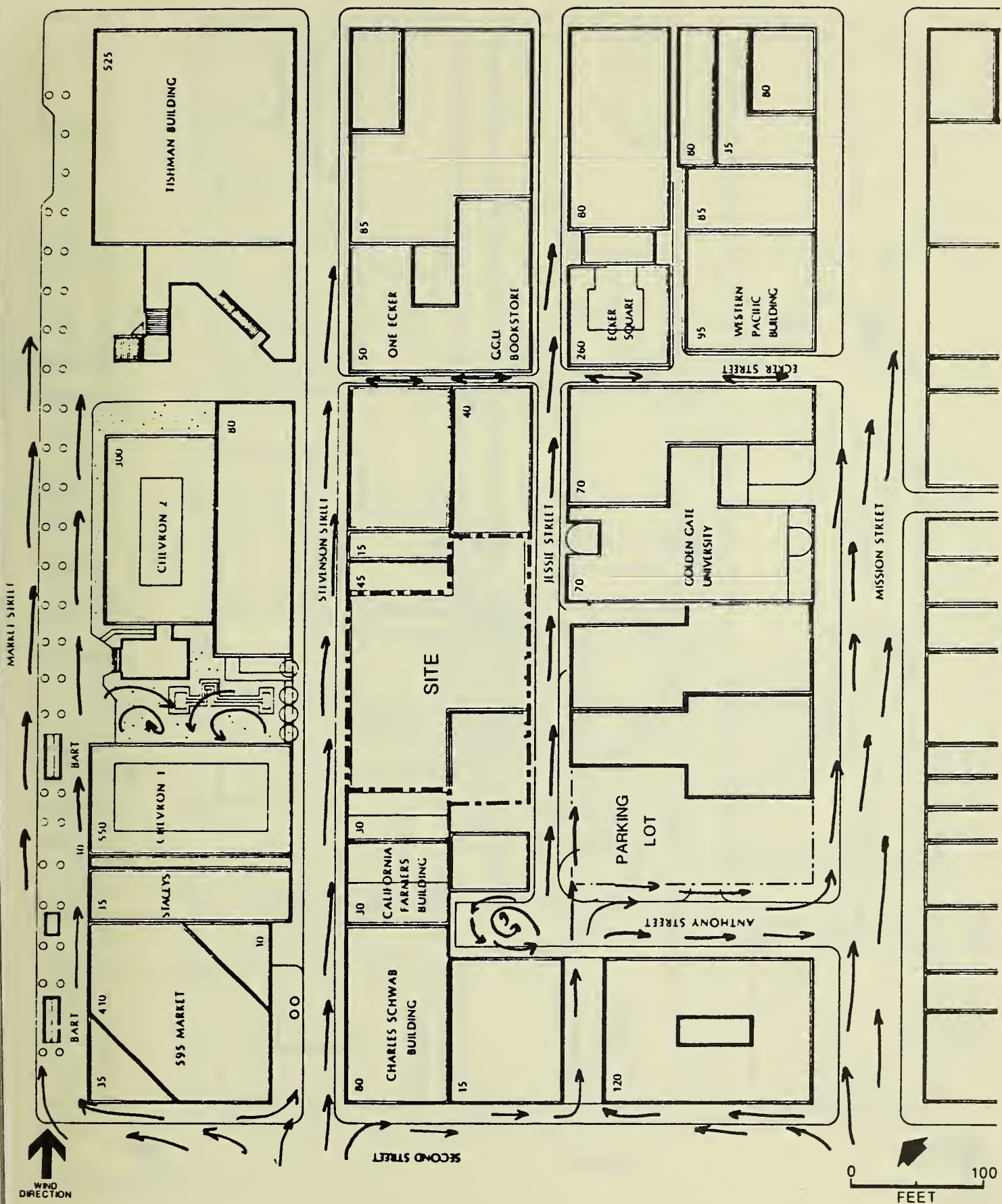
"71 Stevenson (Alternative E) with Lincoln Plaza and 49 Stevenson: Winds on Jessie and Mission Sts. adjacent to 71 Stevenson and Lincoln Plaza



● FIGURE 64: Existing Southwest Wind Speeds

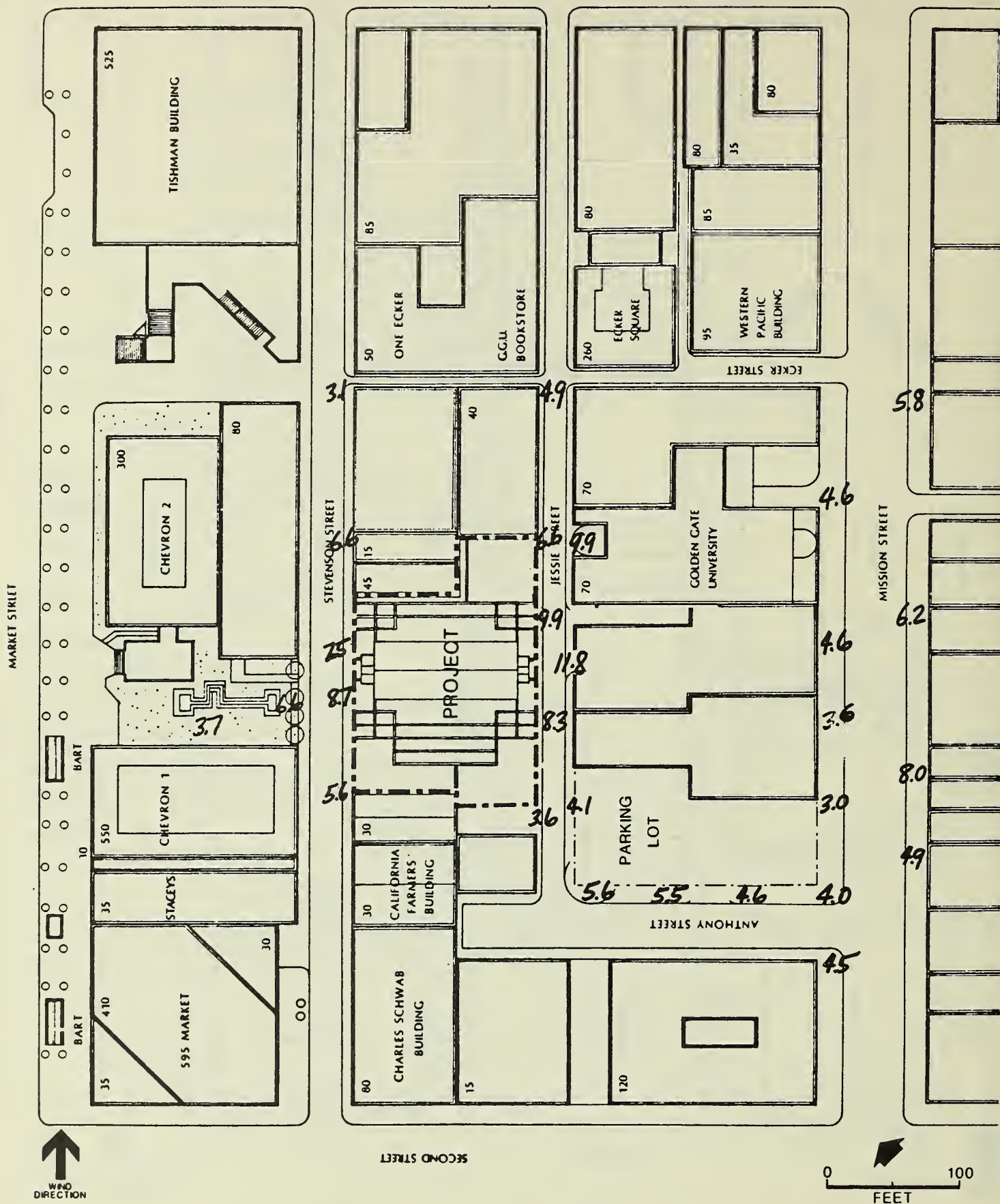
SOURCE: Dr. Bruce White





● FIGURE 65: Existing Southwest Wind Directions

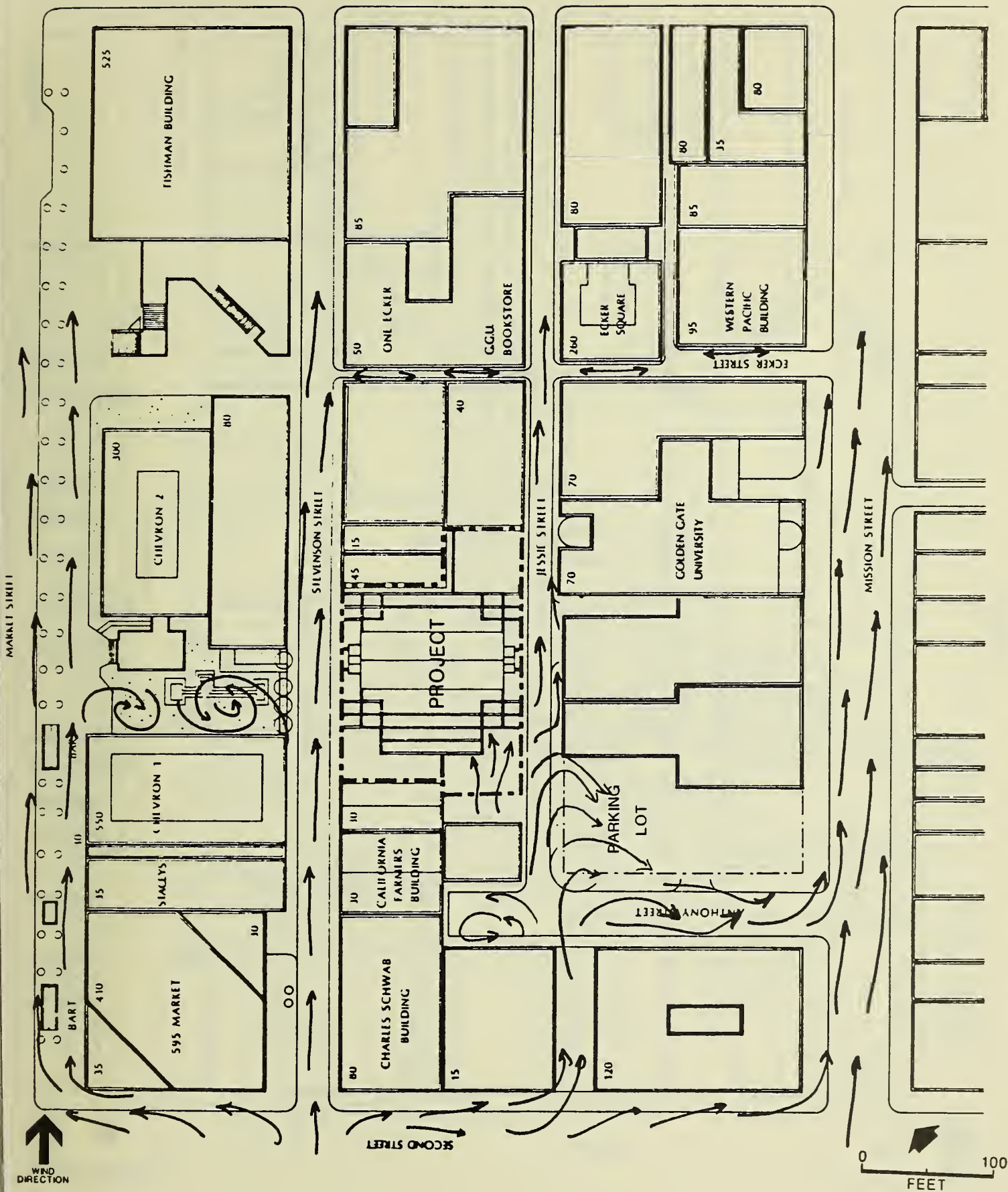
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● FIGURE 66: Southwest Wind Speeds - Alternative E

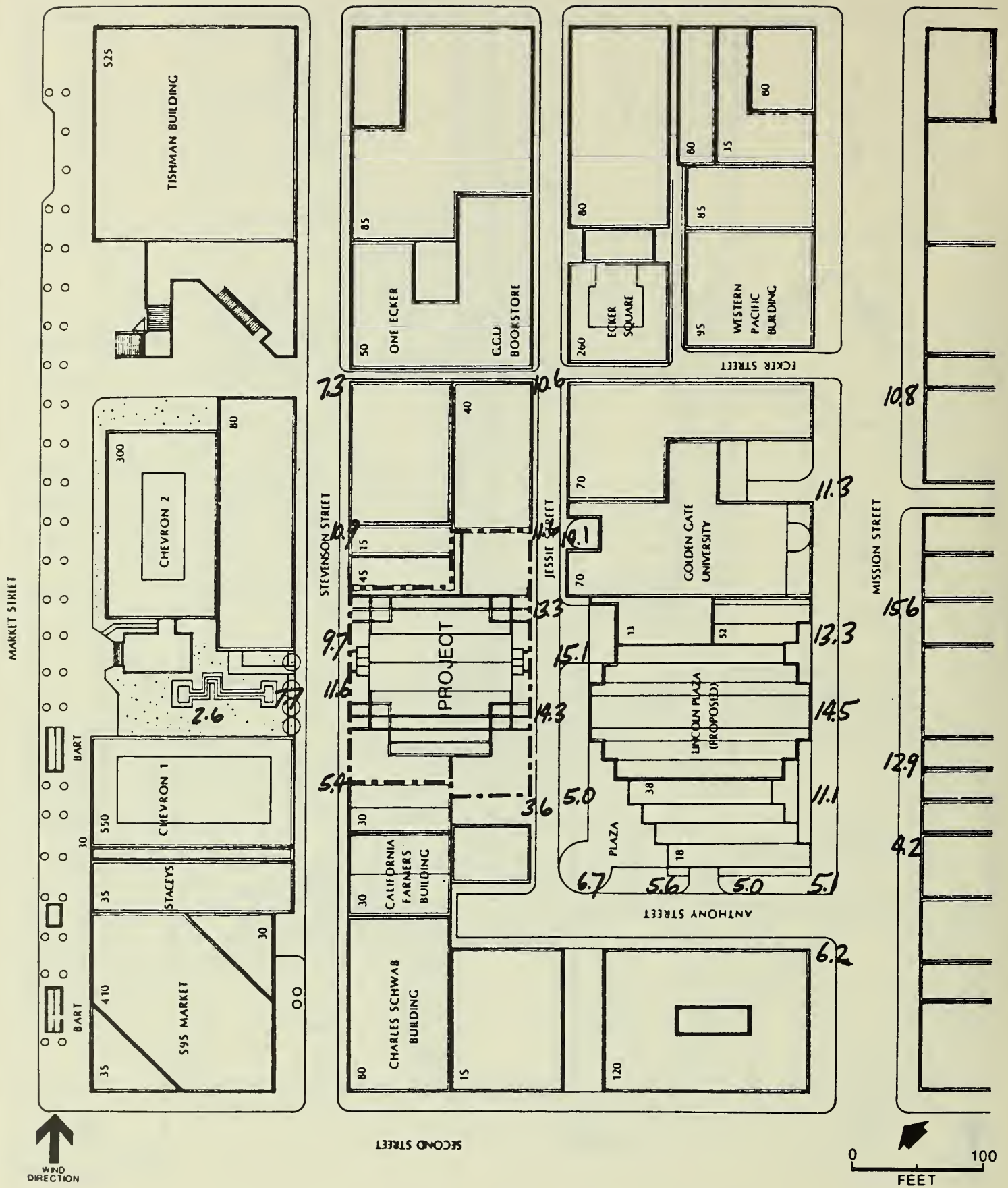
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● FIGURE 67: Southwest Wind Directions - Alternative E

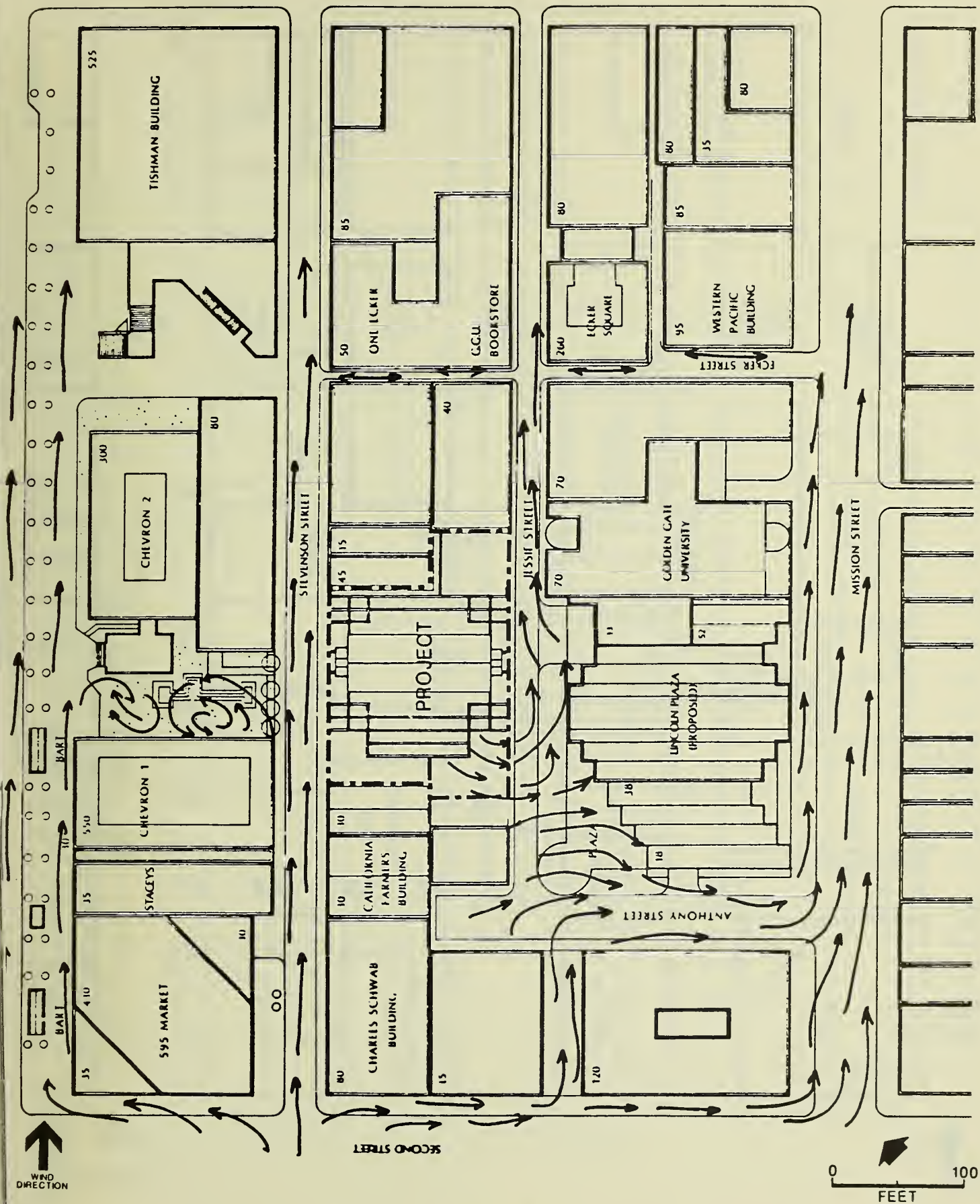
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● FIGURE 68: Southwest Wind Speeds -  
Alternative E and Lincoln Plaza

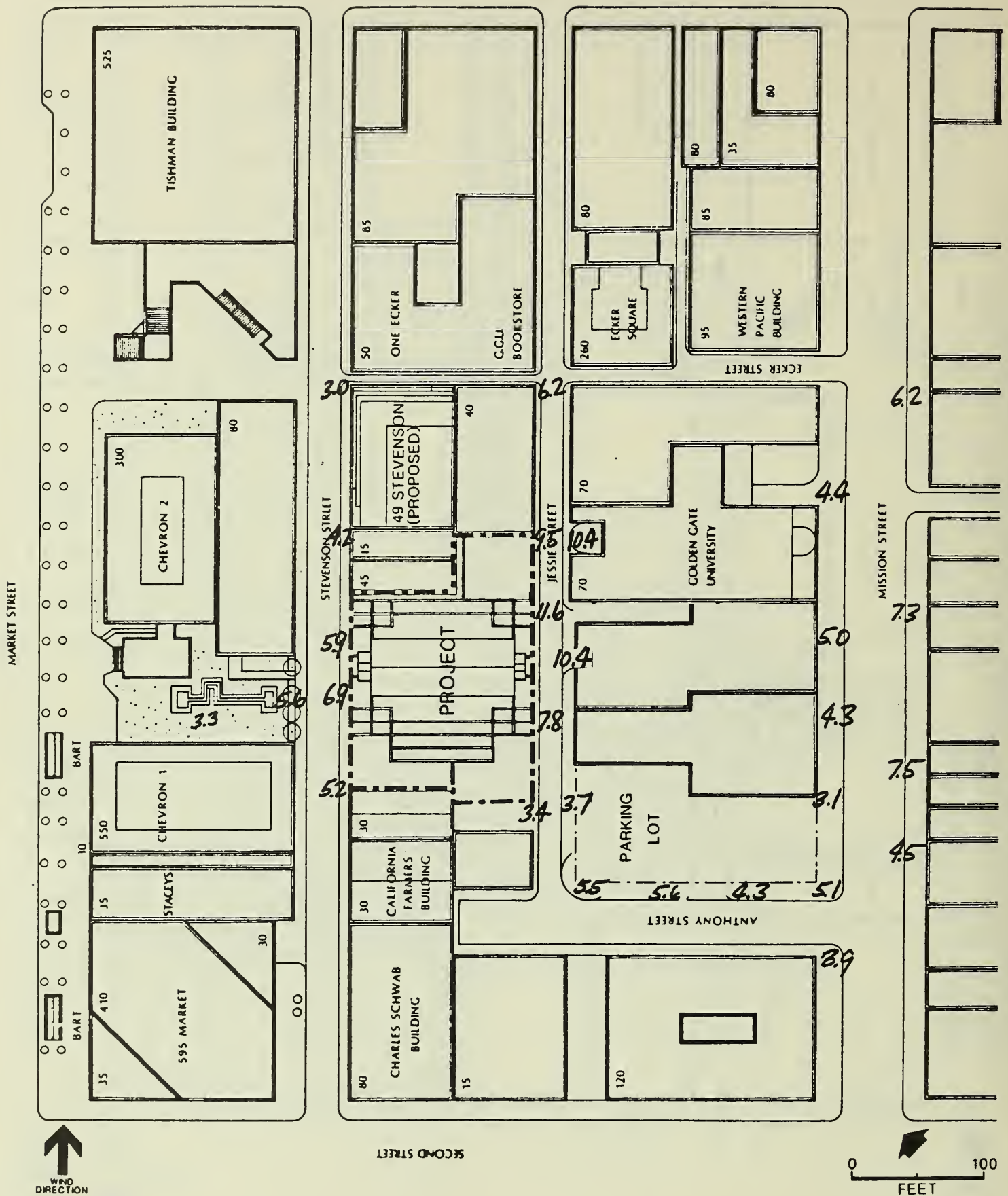
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● FIGURE 69: Southwest Wind Directions -  
Alternative E and Lincoln Plaza

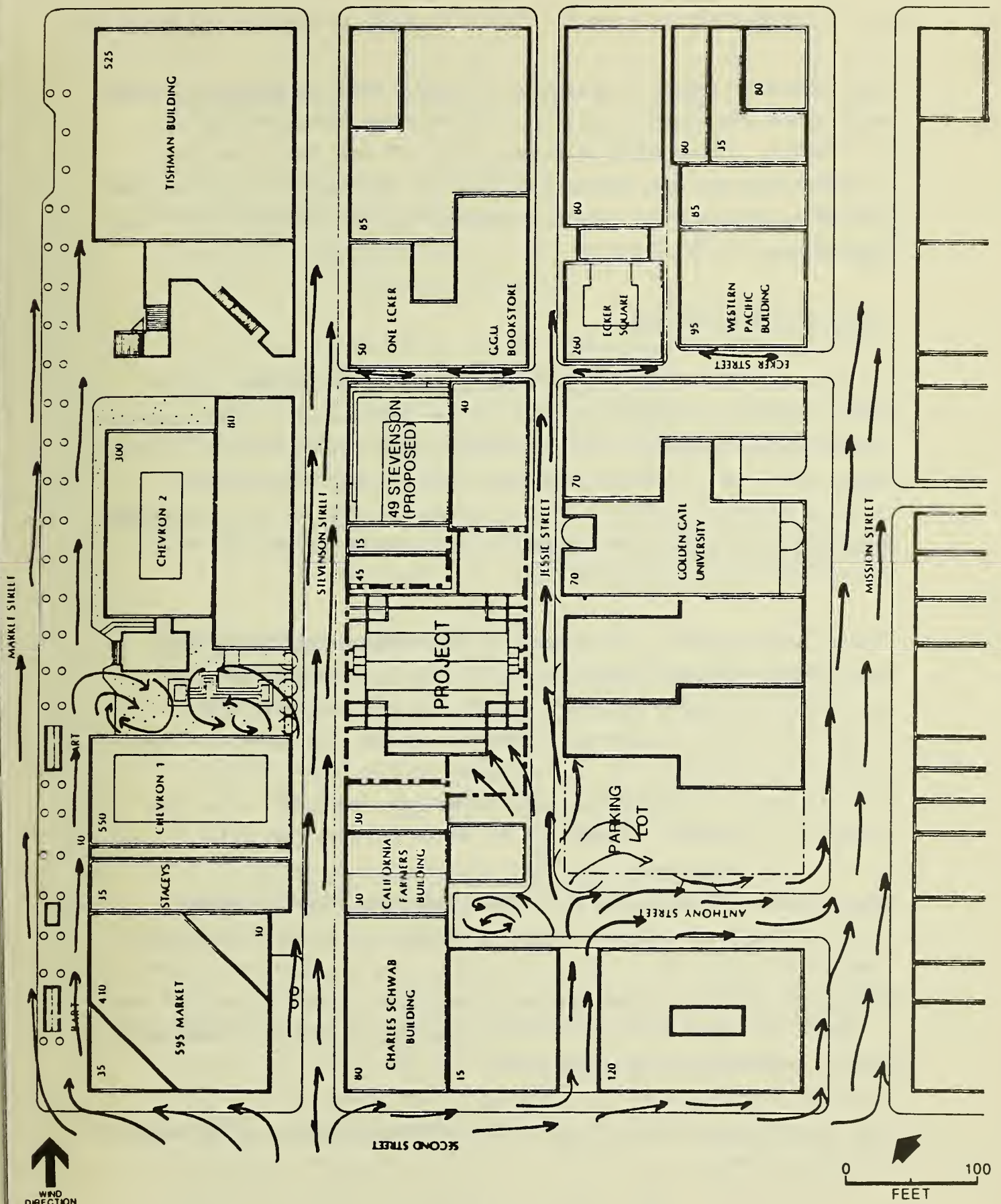
SOURCE: Dr. Bruce White



● FIGURE 70: Southwest Wind Speeds -  
Alternative E and 49 Stevenson

SOURCE: Dr. Bruce White





● FIGURE 71: Southwest Wind Directions -  
Alternative E and 49 Stevenson

SOURCE: Dr. Bruce White

would more than double to quadruple in speed. Winds on these two streets would exceed the comfort criterion of 11 mph (see Figures 72-73, pp. 379-380). There would be increases to 8-11 mph, 13-15 mph, and 12-15 mph from 4-5 mph, 3-4 mph, and 3-4 mph, respectively, on Stevenson, Jessie, and Mission Sts. Winds on Anthony St. would increase to 5-6 mph from 4-5 mph.

"Summary of Wind Effects

"As indicated above, the primary objective of the additional (current) wind effort was to measure and evaluate the ground-surface wind impacts of three proposed buildings on AB 3708, alone and/or in combination. Seven combinations, or "scenarios", including the existing setting, were tested. Details are presented in Wind-Tunnel Studies of the 71 Stevenson Street Project by Bruce White, available for review at the Office of Environmental Review, 450 McAllister St., 5th Floor.

"In the current study, the emphasis is on ground-surface wind speeds, rather than wind-speed ratios. For calculation of wind speeds, the free-stream wind speed used here was, for each of the three wind directions tested, the average summer free-stream wind speed at 4 p.m.

"For the sake of completeness, wind speeds and wind-speed ratios are presented (in separate figures) in Dr. White's report (op. cit.).

"The primary evaluation was directed to locations at which average ground-surface wind speeds on summer afternoons at 4 p.m. exceeded the "comfort criterion" level of 11 mph, and to possible locations at which wind speeds during the same periods exceeded the "hazard criterion" level of 35 mph more than 5% of the time (mean ground-surface wind speed about 25 mph, depending on wind direction).

"The following results have been derived from examination of the report by Dr. Bruce White.



## VIII. Summary of Comments and Responses

- "1. In no situation (any wind direction) was the hazard criterion level (25 mph mean wind speed) approached.
- "2. As expected, southwest (SW) winds were much more important than west (W) or northwest (NW) winds. In no situation did W or NW winds approach the comfort criterion level. W and NW winds could therefore be omitted from further consideration.
- "3. For SW winds, which are aligned with the direction of Stevenson, Jessie and Mission Streets, the comfort criterion level was exceeded at several locations for several of the scenarios. While the comfort criterion level was never reached in the existing setting, it was exceeded as follows for other scenarios:

"a. 71 Stevenson alone: at one location along Jessie St. (slightly -- at 11.8 mph);

"b. 71 Stevenson with Lincoln Plaza: at 12 locations, one along Stevenson, five along Jessie, and six along Mission (maximum 15.6 mph);

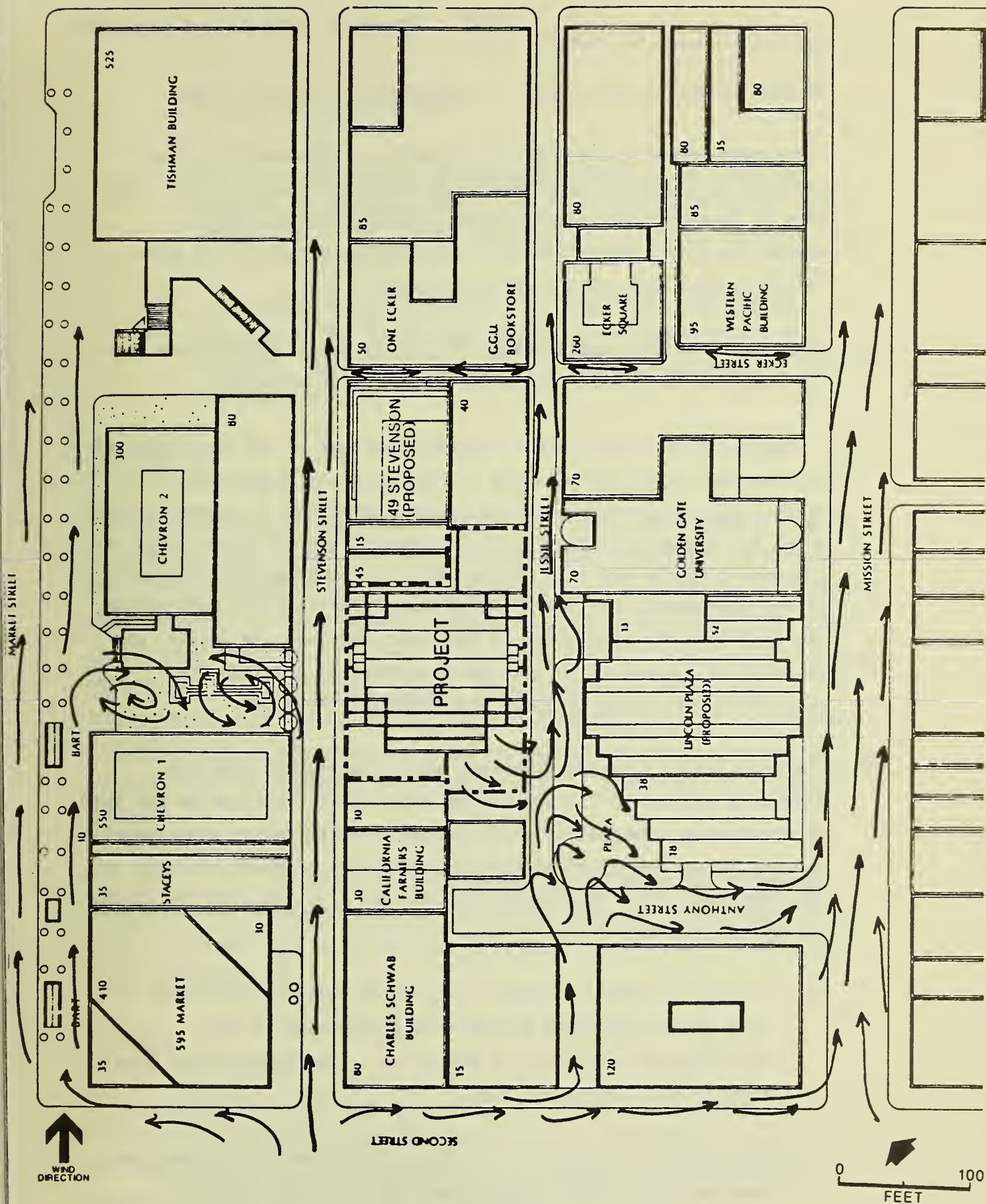
"c. 71 Stevenson with 49 Stevenson: at one location, along Jessie St. (slightly -- 11.6 mph);

"d. 71 Stevenson with Lincoln Plaza and 49 Stevenson: at 13 locations, six along Jessie and seven along Mission (maximum 14.9 mph -- at two locations);

"Thus, 71 Stevenson alone produced one location at which the comfort criterion level was exceeded slightly (by about 1 mph), and the situation did not change with the addition of 49 Stevenson. Lincoln Plaza alone produced three locations at which the comfort criterion level was exceeded, by a maximum of about 1 mph. Lincoln Plaza with 71 Stevenson produced 12 locations at which the comfort criterion level was exceeded, by a maximum of about 5 mph. The addition of 49 Stevenson to the pair added one location (total 13), with a







● FIGURE 73: Southwest Wind Directions -

Alternative E, Lincoln Plaza and 49 Stevenson

SOURCE: Dr. Bruce White

maximum exceeding the comfort criterion level by about 4 mph.

"Stevenson Street would remain quiescent. 71 Stevenson by itself produced no locations approaching the comfort criterion level. Only when 71 Stevenson was modeled with Lincoln Plaza was there a noteworthy effect along Stevenson Street: one point at 11.6 mph, slightly above the comfort criterion level.

"Chevron Plaza also would remain relatively calm. Winds there did not approach the comfort criterion level in any scenario.

- "4. It appears that there would be no wind problems in the open lobby of 71 Stevenson, with its openings to Stevenson and Jessie Streets. Winds, measured at both openings, were under 6 mph for W and NW winds under all scenarios. With SW winds, the comfort criterion level was exceeded slightly (at 11.6 mph) at only one lobby-access location (along Stevenson), for the 71 Stevenson / Lincoln Plaza combination. The fact that the wind speed at the other entrance, on Jessie, was measured at 3.6 mph in this scenario appears to preclude the possibility of strong or gusty winds through the lobby.
- "5. The measured wind speeds described above (maximum of 15.6 mph, against a maximum of 7.6 mph in the existing setting) can be put into perspective by examination of wind speeds determined in wind-tunnel testing (under identical methodology) of other proposed projects in the Downtown. All cited speeds are for the existing settings at the following locations:
- "a. In the Post-Mason (Olympic Club) Hotel study, a wind speed of 20.7 mph was measured at the northwest corner of the intersection of Sutter and Mason Sts. (Post-Mason Hotel Draft EIR, 81.400E, April 15, 1983.)
- "b. In the 580 California St. study, a wind speed of 18.2 mph was measured across the northern half of the intersection of California and Kearny Sts. (580 California St. Final EIR,



## VIII. Summary of Comments and Responses

81.705E, January 6, 1983.)

- "c. In the 222 Kearny St. study, a wind speed of 12.7 mph was measured on the east side of the intersection of Sutter and Kearny Sts. (222 Kearny St. Draft EIR, 81.687E, March 11, 1983.)
- "d. In the Bank of Canton study, a wind speed of 12.5 mph was measured at the three-way intersection of Washington and Montgomery Sts. and Columbus Ave. (Bank of Canton Final EIR, EE 80.296, July 15, 1982.)

### "Mitigation

"Mitigating measures that should reduce wind speeds on Stevenson, Jessie and Mission Sts. would be a significant set-back on Jessie and Mission Sts., of both Alternative E and Lincoln Plaza. A set-back of 49 Stevenson would probably not be necessary because it would have a negligible effect on the wind environment. A reduction in the overall size (square footage) of both the Alternative and Lincoln Plaza also could reduce the street-level wind speeds. Changing of massing and building orientation probably could reduce street-level wind speeds. However, such design changes could be measured and validated only in additional wind-tunnel testing.

"If there is an increased scale of development directly upwind of the proposed sites (to the southwest) involving high-rise structures, potentially the wind environment on Stevenson, Jessie and Mission Sts. would be improved.

### "HOUSING

"This alternative, with 335,450 sq. ft. of office space, would have a housing demand, based on the OHPP guidelines, of 298 units. These, or their equivalent in housing credits in conformance to OHPP guidelines, would be provided as described in the EIR for the project.

## VIII. Summary of Comments and Responses

### "TRANSPORTATION

"There would be a statistically insignificant increase in transit ridership and vehicle trip ends generated with this alternative as compared to the project.

"This Alternative would have 75 parking spaces, 68 of which would be short-term spaces. Alternative E would meet the existing and project-related on site parking short-term parking demand.

"Peak-hour vehicle trip ends and Muni-ridership would increase by about 1%. This represents 11 more vehicle trip ends and 9 Muni riders.

"The effect of alternative-related pedestrian and vehicle trips on the operation of crosswalks and travel lanes at the intersection of Mission and First Sts. would, as with the project, be unnoticeable.

### "ENERGY /1/

"This alternative would consume about 3.3 million kilowatt-hours (kwh) of electricity annually, or about 275,000 kwh per month. Peak electrical demand would be about 1,140 kw, and would occur between 8:00 a.m. and 5:00 p.m. in the fall. PG&E's systemwide peak electrical demand would occur in August, when the project's peak demand would be less than 1,110 kw.

"The alternative would consume about 1.8 million cubic ft. (1.91 billion Btu) of natural gas annually, or about 159 million Btu per month. Natural gas use would peak between 6:00 and 9:00 a.m. on January mornings as the hot water boilers begin heating the building.

"The alternative would consume a total of an estimated 35.5 billion Btu annually. The projected per-sq.-ft. electricity requirement, 0.87 kwh per month, would be less than an average of the estimated per-sq.-ft. requirement of 1.4 kwh per month estimated for 16 other proposed developments (see Appendix F, p. 425). The projected per-sq.-ft. natural gas requirement, 1,170 Btu per month, is less than an average per-sq.-ft.



requirement of 2,200 Btu per month estimated for the 16 other proposed developments. The alternative's projected total annual per-sq.-ft. energy requirement, about 111,300 Btu, would be about 47% less than the average of 213,000 Btu per month projected for the 16 other developments.

"In addition, a solar heating system is being considered for domestic water heating.

"FIRE/HAZARDS

"In the course of design of this alternative, the Fire Department was consulted as to its preferred emergency access/evacuation routes. The Department indicated that Stevenson St. would be the preferred emergency access route for fire trucks, but that people in the building should be directed to Jessie St. This scheme would minimize potential conflicts between emergency vehicles and people leaving the building. The stairwells in this alternative have thus been designed to open onto the Jessie St. side of the site at street level (see Figure 74, p. 385). Stevenson St. is 40-ft. wide, property line to property line, and is of adequate width to accommodate emergency vehicles. The Fire Department has reviewed the design in conjunction with the Lincoln Plaza and 49 Stevenson proposals and has indicated its approval.

"NOTES - Alternative E

"/1/ A computerized energy analysis using the Trace Version 500 program was performed by the project engineers, Glumac & Associates. Building occupancy was assumed to be 26 days per month; heating system efficiency was assumed to be 70%; lighting was estimated at two watts per sq. ft.; and wall receptacle loads were estimated at 0.5 watts per sq. ft.





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San Francisco, California 94108

San Francisco Labor Council  
3068 - 16th Street  
San Francisco, California 94103  
Attention: Bernard Speckman

San Francisco Planning and Urban  
Research Association  
312 Sutter Street  
San Francisco, California 94108

San Francisco Convention and  
Visitors Bureau  
1390 Market Street, Suite 260  
San Francisco, California 94102  
Attn: R. Sullivan, Manager

San Francisco Downtown Market Street  
Improvement Association  
17 Drumm Street  
San Francisco, California 94111  
Attention: Ralph Leon Isaacs

San Francisco Forward  
690 Market Street  
San Francisco, California 94104  
Attention: Frank Noto

San Francisco Tomorrow  
88 First Street, Room 600  
San Francisco, California 94105

San Franciscans for Reasonable  
Growth  
88 First Street, Room 600  
San Francisco, California 94105

San Francisco Retail Merchants  
Association  
582 Market Street, Suite 1001  
San Francisco, California 94104



John Sanger & Associates  
2340 Market Street  
San Francisco, California 94114  
Attention: John Sanger

Senior Escort Program  
South of Market Branch  
814 Mission Street  
San Francisco, California 94103  
Attention: Leslie Halford  
Neighborhood Coordinator

Sierra Club  
530 Bush Street  
San Francisco, California 94105  
Attention: Becky Evans

Tenants and Owners Development  
Corporation  
177 Jessie Street  
San Francisco, California 94105  
Attention: John Elberling

Timothy Tosta  
333 Market Street, Suite 2230  
San Francisco, California 94105

Steven Weicker  
899 Pine Street, #1610  
San Francisco, California 94108

● Gary Wing  
71 Stevenson St.  
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Jeff Vance  
Campeau Corp. of California  
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San Francisco, California 94105

Andy Molloy  
Highfield Development Colorado Inc.  
1210 1176 West Georgia Street  
Vancouver, British Columbia  
Canada V6E 4A2

Peter Gordon  
Gensler and Associates  
22 Fourth Street  
San Francisco, California 94103

# NEIGHBORING PROPERTY OWNERS

John H. Teitscheid  
536 Mission Street  
San Francisco, California 94105

Walter, DNE & Co.  
562 Mission Street  
San Francisco, California 94105

Graham, Burton E. & Rayna A.  
Gridley Arnold & Elsie N.  
2787 California Street  
San Francisco, California 94115

Title Insurance & Trust Co.  
160 Pine Street  
San Francisco, CA 94111

A. Parik  
A. Parik Associates  
96 Jessie Street  
San Francisco, California 94105

Golden Gate University  
550 Mission Street  
San Francisco, California 94105

Perrasso, Claude D. & Donna  
Goria, Clotilde E.  
3055 26th Avenue  
San Francisco, California 94132

Keiles, Arnold R.  
Carteris, Marlene K.  
Bank of America, Etc. Tr.  
11476 Lindy Lane  
Cupertino, California 95014

Chevron USA  
P.O. Box 7611  
San Francisco, California 94120

Standard Oil  
575 Market Street, Bld. Corp.  
P.O. Box 7611  
San Francisco, California 94120

David P. Rhoades, SRPA  
44 Montgomery Street, Suite 547  
San Francisco, California 94104

XI. FEIR CERTIFICATION MOTION

---

71 Stevenson Street  
June 16, 1983  
81.493E

CERTIFICATION MOTION

ADOPTING FINDINGS RELATED TO THE CERTIFICATION OF A FINAL ENVIRONMENTAL IMPACT REPORT FOR A PROPOSED OFFICE BUILDING LOCATED AT 71 Stevenson Street.

MOVED, that the San Francisco City Planning Commission ("Commission") hereby CERTIFIES the Final Environmental Impact Report identified as "71 Stevenson Street Office Building", case file no. 81.493E based upon the following findings:

1. The City and County of San Francisco, acting through the Department of City Planning ("Department") fulfilled all procedural requirements of the California Environmental Quality Act (Cal. Pub. Res. Code Section 21000 et seq., "CEQA"), and the State CEQA Guidelines (Cal. Admin. Code Title 14, Section 15000 et seq., "CEQA Guidelines") and Chapter 31 of the San Francisco Administrative Code ("Chapter 31").

a. The Department determined that an EIR was required and provided public notice of the determination by publication in a newspaper of general circulation on January 22, 1982.

b. On October 15, 1982, the Department published the Draft Environmental Impact Report ("DEIR") and provided public notice in a newspaper of general circulation of the availability of DEIR for public review and comment and of the date and time of the City Planning Commission public hearing on the DEIR; the notice was mailed to the Department's list of persons requesting such notice.

c. Notices of availability of the DEIR and of the date and time of the public hearings were posted near the project site by department staff on October 18, 1982.

d. On October 15, 1982, copies of the DEIR were mailed or otherwise delivered to a list of persons requesting it, to those noted on the distribution list in the DEIR, to adjacent property owners, and to other government agencies, the latter both directly and through the State Clearinghouse.

e. Notice of Completion was filed with the State Secretary of Resources via the State Clearinghouse on October 15, 1982.

f. The State Clearinghouse agreed to a shortened public review period (from October 22, 1982 to November 18, 1982) and submitted comments from State agencies within that period.



## XI. FEIR Certification Motion

2. The City Planning Commission held a duly advertised public hearing on said Draft Environmental Impact Report on November 18, 1982, at which opportunity was given for, and public comment received on the DEIR.

3. The Department prepared responses to comments on environmental issues received at the public hearing and in writing during the public review period, prepared additions to the text of the DEIR in response to comments received or based on additional information that became available during the public review period, and corrected errors in the DEIR. This material was presented in a "Draft Summary of Comments and Responses", published on June 6, 1983, was distributed to the Commission and to all parties who commented on the DEIR, and was available to others upon request at Department offices.

4. A Final Environmental Impact Report has been prepared by the Department, based upon the Draft Environmental Impact Report, any consultations and comments received during the review process, a preliminary review and consideration of the information contained in the consultant report, "Growth Management Alternatives in Downtown San Francisco", any additional information that became available, and the Summary of Comments and Responses, all as required by law.

5. Project Environmental Impact Report files have been made available for review by the City Planning Commission and the public and these files are part of the record before the Commission.

6. On June 16, 1983, the Commission reviewed the Final Environmental Impact Report and found that the contents of said report and the procedures through which the Final Environmental Impact Report was prepared, publicized and reviewed comply with the provisions of the California Environmental Quality Act, the Guidelines of the Secretary for Resources and Chapter 31 of the San Francisco Administrative Code.

7. The project sponsor has indicated that the presently preferred alternative is that described in the EIR as Alternative E, a 23-story office building.

8. The City Planning Commission hereby does find that the Final Environmental Impact Report concerning 83.493E: 71 Stevenson Street Office Building is adequate, accurate and objective, and that there are no significant revisions to the Draft Environmental Impact Report, and hereby does CERTIFY THE COMPLETION of said final Environmental Impact Report in compliance with the California Environmental Quality Act and the State Guidelines.

9. The Commission, in certifying the completion of said Final Environmental Impact Report, hereby does find that the proposed project to be presented to the Planning Commission for consideration and approval described as Alternative E in the EIR, will have a significant effect on the environment in that it will create a demand for long term parking, will increase transit impacts on the Muni and other transit systems, will add to the demand for housing in the City and in the Bay Area, will shade portions of Chevron Plaza generally between the hours of 10 AM to 12 noon, and will contribute to cumulative impacts on transit, pedestrian and vehicular traffic, and parking and housing demand, produced by reasonably foreseeable cumulative development in the downtown area.

XI. FEIR Certification Motion

I hereby certify that the foregoing Motion was ADOPTED by the City Planning Commission at its regular meeting of June 16, 1983.

Lee Woods, Jr.,  
Secretary

AYES: Rosenblatt, Karasick, Klein, Nakashima, Salazar, Kelleher

NOES: Bierman

ABSENT:

PASSED:



## XII. APPENDICES

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## APPENDIX A - LAND USE AND CUMULATIVE DOWNTOWN OFFICE DEVELOPMENT

● TABLE A-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1982, IN GROSS SQUARE FEET

<u>Year</u>	<u>Total Gross Sq. Ft. Completed</u>	<u>5-Year Total</u>	<u>5-Year Annual Average</u>	<u>Cumulative Total of All Office Buildings</u>	<u>Cumulative Total of All Downtown Office Buildings</u>
Pre-1960		(Net)(a)	(Net)(a)	28,145,000(b)	24,175,000(c)
1960	1,183,000				
1961	270,000				
1962	--				
1963	--				
1964	1,413,000				
		2,866,000	573,200		
1960-1964		(2,580,000)	(516,000)	30,725,000	26,754,000
1965	1,463,000				
1966	973,000				
1967	1,453,000				
1968	1,234,000				
1969	3,256,000				
		8,379,000	1,675,800		
1965-1969		(7,541,000)	(1,508,000)	38,266,000	34,295,000
1970	1,853,000				
1971	--				
1972	1,961,000				
1973	2,736,000				
1974	2,065,000				
		8,615,000	1,723,000		
1970-1974		(7,753,000)	(1,550,000)	46,019,000	42,048,000
1975	536,000				
1976	2,429,000				
1977	2,660,000				
1978	--				
1979	2,532,000				
		8,157,000	1,631,400		
1975-1979		(7,341,000)	(1,468,000)	53,360,000	49,389,000
1980	1,284,000				
1981	3,029,000				
1982	3,771,000				
		8,084,000(d)	2,694,700(d)		
1980-82		(7,275,600)(d)	(2,242,500)(d)	60,635,600	56,559,600



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TABLE A-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1982,  
IN GROSS SQUARE FEET (Continued)

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- (a) Net equals 90% of gross. Net new space is added at an increase factor of 90%, since it is assumed that space equal to 10% of a new building is demolished to make land available for the new replacement building.
- (b) Source: San Francisco Downtown Zoning Study, Working Paper No. 1, January 1966, Appendix Table 1, Part 1. For pre-1965, data include the area bounded by Vallejo, Franklin, Central Skyway, Bryant and Embarcadero. Also includes one-third of retail-office mixed use. For post-1964, data include the entire city.
- (c) Gross Floor Space for downtown offices are included for the following functional areas: Financial, Retail, Hotel, Jackson Square, Golden Gateway, Civic Center, South of Market, and Outer Market Street as defined in the cited January 1966 report. For post-1964, the entire area east of Franklin Street is included.
- (d) Three-year total and average.

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SOURCE: Department of City Planning, March 15, 1983.

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TABLE A-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF  
AUGUST 6, 1982

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PROJECTS UNDER FORMAL REVIEW

<u>Assessor's Block</u>	<u>Case No.</u>	<u>Project Name</u>
58	82.234ED	Roundhouse
112	81.258	Ice House Conversion (C)
136	81.245	955 Front at Green
176	81.673	Columbus/Pacific Savoy
228	81.610ED	569 Sacramento (C)
240	81.705ED	580 California/Kearny
265	81.195ED	388 Market at Pine
269	81.132ED	Russ Tower Addition
270	81.175ED	466 Bush
288	81.461ED	333 Bush (Campeau)
288	81.687ED	222 Kearny/Sutter
669	81.667ED	1361 Bush (C)
716	81.581ED	Polk/O'Farrell
3702	81.549ED	1145 Market
3703	81.494ED	1041-49 Market
3707	81.492ED	90 New Montgomery
3707	81.245C	New Montgomery Pl.
3708	81.493ED	71 Stevenson at Ecker
3733	82.29E	832 Folsom
3760	81.386	401 6th
3776	81.59	Welsh Commons
3778	81.630ED	548 5th/Brannan
3781	82.99E	Greyhound Bus Terminal
3786	82.33E	655 5th/Townsend
3789	82.31EV	615 2nd/Brannan (C)
9900	81.63	Ferry Building Rehab
9900		Pier One Development
9900		Agriculture Building



TABLE A-2: Continued

<u>APPROVED PROJECTS</u>		
<u>Assessor's Block</u>	<u>Case No.</u>	<u>Project Name</u>
106	81.415ED	1299 Sansome
161	80.191	Mirawa Center
164	81.631D	847 Sansome
164	81.573D	50 Osgood Place
166	CU81.7	222 Pacific (C)
166	80.15	750 Battery
206	81.165D	401 Washington at Battery
227	80.296	Bank of Canton
261	81.249ECQ	333 California
262	81.206D	130 Battery
267	81.241D	160 Sansome
268	81.422D	250 Montgomery at Pine
271	81.517	453 Grant
271		582 Bush
294	82.870	44 Campton Place
311	82.120D	S.F. Federal
351	DR79.24	Mardikian/1170-1172 Market
3512	82.14	Van Ness Plaza
3518	81.483V	291 10th St.
3705	80.315	Pacific III Apparel Mart
3709	81.113ED	Central Plaza
3715	82.16EC	121 Steuart
3717	80.349	Spear/Main (160 Spear)
3717	82.82D	135 Main
3722	81.548DE	466 Clementina (C)
3722	81.417ED	144 Second at Minna
3724	81.102E	Holland Ct. (C)
3729	82.860	774 Tehama
3733	81.2	868 Folsom
3735	80.106	95 Hawthorne (C)
3738	DR80.5	315 Howard
3741	82.203C	201 Spear
3749	81.18	Marathon - 2nd & Folsom
3751	77.220	National Maritime Union
3752	77.220	Office Bldg. (YBC SB-1)
3763	81.287V	490 2nd at Bryant (C)
3763	81.381	480 2nd at Stillman (C)
3775	81.147V	338-340 Brannan (C)
3776	81.693EV	539 Bryant/Zoe
3788	81.296Z	690 2nd/Townsend (C)
3787	81.306	252 Townsend at Lusk
3789	81.552EV	625 2nd/Townsend (C)
3794	81.569EV	123 Townsend
3803	81.244D	China Basin Expansion

TABLE A-2: Continued

---

<u>PROJECTS UNDER CONSTRUCTION</u>		
<u>Assessor's Block</u>	<u>Case No.</u>	<u>Project Name</u>
163	81.1	901 Montgomery
164	81.251D	936 Montgomery-(disco)
167		Golden Gateway III
196		736 Montgomery
196	CU79.49	Pacific Lumber Co.
208	81.104EDC	Washington/Montgomery
237	DR80.6	353 Sacramento (Daon)
239	DR80.1	456 Montgomery
240	DR80.16	550 Kearny
263	CU79.12	101 California
287	81.550D	Sloane Building (C)
288	DR80.24	101 Montgomery
289	81.308D	One Sansome
292	DR79.13	Crocker National Bank
312	79.370	50 Grant
351	79.133	U.N. Plaza
762		Opera Plaza
3702	81.25	1155 Market/8th
3708	80.34	25 Jessie/Ecker Square
3709	80.36	Five Fremont Center
3712	79.11	Federal Reserve Bank
3715		141 Steuart
3717	79.236	101 Mission at Spear
3717		150 Spear
3718	79.12	Pacific Gateway
3724		Yerba Buena West
3735		Convention Plaza

---

\* Includes all office projects in the greater downtown area and the South of Market area for which a Preliminary Draft EIR has been submitted to the City for review or for which plans are well defined, and all office projects in redevelopment areas that are under construction or for which Land Disposition Agreements have been approved. It does not include projects in the Rincon Point - South Beach or Yerba Buena Center Redevelopment Areas for which no Land Disposition Agreements have been approved by the San Francisco Redevelopment Agency Commission, as it is not possible to know what development will be approved in these areas. It does not include Mission Bay as no formal proposal has been submitted to the City and the project is still in early planning stages.

\*\* The letter (C) after a project refers to a conversion (generally industrial and/or warehouse space to office space).

SOURCE: Department of City Planning.

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TABLE A-3: GROSS SQUARE FEET OF CUMULATIVE OFFICE AND RETAIL DEVELOPMENT\* IN DOWNTOWN SAN FRANCISCO AS OF AUGUST 6, 1982

<u>Status of Project</u>	<u>Office (Gross Sq. Ft.)</u>		<u>Retail (Gross Sq. Ft.)</u>	
	<u>Total New Constr.</u>	<u>Net New Constr.</u>	<u>Total New Constr.</u>	<u>Net New Constr.</u>
Under Formal Review	4,220,970	3,801,570	310,650	249,150
Approved	5,428,350	4,862,600	187,850	150,310
Under Construction	<u>7,753,050</u>	<u>7,427,350</u>	<u>260,250</u>	<u>136,050</u>
GRAND TOTALS	17,402,370	16,091,520	758,750	535,510

\* The list of projects shown in Table A-2 and the development totals shown in Table A-3 include all office projects in the greater downtown area and the south of Market area that are under construction or have been approved, and all projects for which a Preliminary Draft EIR has been submitted to the City for review or for which plans are well defined, and all office projects in redevelopment areas that are under construction or for which Land Disposition Agreements have been approved by the San Francisco Redevelopment Agency Commission. Projects that were not definitive and/or appear to be inactive or withdrawn by the project sponsor were not included in the cumulative analyses.

Hotel projects have not been included in the cumulative analyses because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit. Residential projects have not been included because residential travel in the downtown is generally in the opposite direction to commute traffic during peak-hours. The office trip generation rate and modal split distribution are predicated on the assumption that housing would be available in the City; thus inclusion of residential projects would be double counting of project generated travel.

Two redevelopment areas (Yerba Buena Center and Rincon Point - South Beach) and one private development (Mission Bay) are located in or near the greater downtown area. In the redevelopment areas the majority of building sites do not yet have Land Disposition Agreements (LDA) approved. Until such time as specific LDA's are approved, no estimate of travel demand can be made (thus, parcels for which no LDA exists have not been included in the cumulative analyses). Development in the Yerba Buena Center (YBC) Redevelopment Area will be in accordance with the YBC Redevelopment Plan, as amended. Possible land uses that would be in accordance with the Yerba Buena Center Redevelopment Area Plan include commercial entertainment, convention facility (in place), cultural, downtown support service, exhibit/ballroom space, hotel rooms, institutional, light industry, market-rate dwelling units, subsidized dwelling units, office, park or plaza, pedestrian concourse, parking and, retail./1/ Possible land uses in the Rincon Point - South Beach Redevelopment Area include hotel, housing, office, open space, public parking, retail and, warehouse uses./2/ Mission Bay has not been included in the cumulative analyses as no application has been submitted to the City and it is uncertain what formal proposal may be made.

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TABLE A-3: Continued

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/1/ Land uses from Draft Second Supplement Yerba Buena Center Final Environmental Impact Report, San Francisco Department of City Planning May 28 1982.

/2/ Land uses from Rincon Point - South Beach Redevelopment Area, San Francisco, California, Final Environmental Impact Report/Environmental Impact Statement, San Francisco Department of City Planning certified November 5, 1980.

SOURCE: Department of City Planning.

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APPENDIX B: ARCHITECTURAL EVALUATION SURVEYS

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The Architectural ratings discussed in the text of this report (see Section III.A., Architectural Resources and Urban Design; Figure 11, p. 24) represent the results of two separate architectural surveys.

## SAN FRANCISCO DEPARTMENT OF CITY PLANNING INVENTORY

Between 1974 and 1976, the San Francisco Department of City Planning conducted a citywide inventory of architecturally significant buildings. An advisory review committee of architects and architectural historians assisted in the final determination of ratings for the 10,000 buildings, entered in an unpublished 60-volume record of the inventory. The rated buildings have been represented on a set of color-coded maps which identify the location and relative significance of each building surveyed. The maps are available for public inspection at the Department of City Planning.

The inventory assessed the architectural significance of the surveyed structures from the standpoint of overall design and particular design features. Both contemporary and older buildings were included, but historical associations were not considered. Each building was rated numerically according to its overall architectural significance. The ratings ranged from a low of "0" to a high of "5". Factors considered included architectural significance, urban design context, and overall environmental significance. The architectural survey resulted in a listing of the best six percent of San Francisco's buildings. In the estimation of the inventory participants, buildings rated "3" or higher represent approximately the best two percent of the City's architecture.

## HERITAGE SURVEY

More recently, the Foundation for San Francisco's Architectural Heritage, through its consultants, Charles Hall Page & Associates, Inc., conducted an architectural and historical survey of all downtown structures. In 1979, the inventory results were published in the book Splendid Survivors. Criteria considered in rating the buildings include Architectural Significance and Negative Alterations. Summary ratings from "A" to "D" were then assigned to each building on the basis of these scores. The summary ratings indicate the following:

- A. Highest Importance. Individually the most important buildings in downtown San Francisco. All "A" group buildings are eligible for the National Register and have highest priority for City landmark status.
- B. Major Importance. Buildings which are of individual importance by virtue of architectural, historical, and environmental criterion

reservation Advisory Board considers "B" buildings also to have highest priority for City landmark status.

- C. Contextual Importance. Buildings which are distinguished by their scale, materials, compositional treatment, cornice and other features. Many "C" group buildings may be eligible for the National Register as part of historic districts.
- D. Minor or No Importance. Buildings which are insignificant examples of architecture. Most "D" group buildings are "sites of opportunity."

NOT RATED. Buildings which have been built or suffered insensitive exterior remodelings since 1945.

#### ARCHITECTURALLY AND/OR HISTORICALLY SIGNIFICANT BUILDINGS IN THE DOWNTOWN

On May 29, 1980, the City Planning Commission by Resolution No. 8600 adopted a list of architecturally and/or historically significant buildings in the Downtown area, based on the above described surveys. The purpose of the list is to advise developers and building owners of the importance the City places upon conservation of significant buildings and to require special review by the Commission of any plans which would affect any building or buildings on such list. As noted in Section III.B., 2 buildings on the project site are included on this list.



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APPENDIX C - EMPLOYMENT, HOUSING AND FISCAL FACTORS

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TABLE C-1: PROJECTED EFFECTS OF DOWNTOWN OFFICE DEVELOPMENT ON REGIONAL HOUSING MARKETS, 1980-85

	Project Demand in 1985 Number of Households*	Cumulative Demand 1982 to 1990(c) Number of Employees	Net Housing Stock Growth 1982-1990(d) No. Units	Demand as a Percent of Growth 1982 to 1990 Project Cumulative
San Francisco (a)	140 to 290	9,900 to 25,800	12,000	1.2 to 2.4 57.5 to 119.2
Peninsula (b) (San Mateo and Santa Clara Cos.)	180	11,600	87,600	1.5 10.2
East Bay (a) (Alameda and Contra Costa Cos.)	390	19,300	111,800	3.3 13.3
North Bay (b) (Marin and Sonoma Cos.)	155	7,700	36,800	1.3 16.0
TOTAL	865 to 1,015	48,300 to 64,400	248,200	7.2 to 8.5 14.7 to 17.7

(a) Range of San Francisco employees and households based on 101 Montgomery Street Final EIR, EE80.26, certified May 7, 1981 (15-30% of all employees would reside in San Francisco and 1.4 workers would occupy each household) and "Office Housing Production Program (OHPP) Interim Guidelines," Department of City Planning, January 22, 1982 (40% of all employees would reside in San Francisco and 1.8 workers would occupy each household).

(b) Distribution of employees based on weighted average of expected employees in Federal Reserve Bank (EE78.207), 101 California Street (EE78.27), Pacific Gateway, (EE78.61), and Crocker National Bank (EE78.298), from 456 Montgomery Street Final EIR (EE78.178), p. 167. Workers per household in non San Francisco Counties is assumed to be 1.3 based on 1980 Census data; distributions are: Peninsula, 18%, East Bay, 30%, and North Bay 12%.

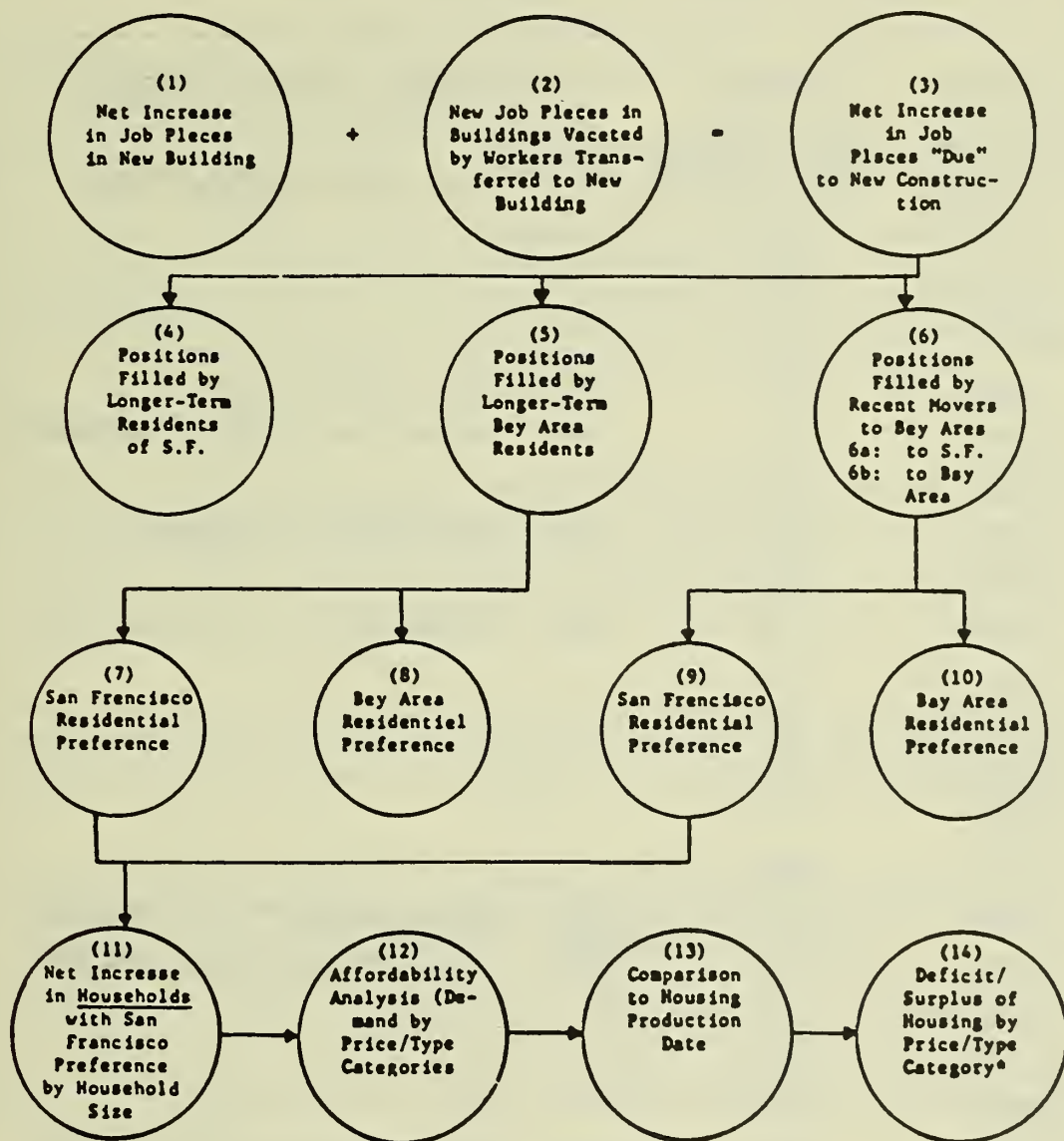
(c) Total office space considered in this analysis is about 16.1 million sq. ft. of net new office space (see Tables A-2 and -3, Appendix A). The proposed Housing Element (May 1982) estimates San Francisco housing needs from 1980-85 in Table 21A. This estimate, based on the Citizen's Housing Task Force Report, July 21, 1982, shows a need for about 16,000 to 19,000 units. The "needs" estimate uses a similar office development basis, but also includes housing demand generated by other sources in addition to office development and covers the years 1980-85.

(d) Net housing stock growth is based on "Projections 79," Association of Bay Area Governments, January 1980. Projections contained in this document for 1980-1990 were prorated to reflect 1982-1990 net housing stock growth.

\* Rounded to the nearest five.

SOURCE: Environmental Science Associates, Inc.





\* Demand due to citywide employment growth need also be considered here.

**FIGURE C-1:**  
Housing Demand and Affordability  
Model for New, High-Rise  
Office Building

SOURCE: Questor Associates, June 1982

TABLE C-2: HOUSING AFFORDABILITY BY HOUSEHOLD INCOME

<u>Gross Annual Income Per Household or Per Individual</u>	<u>Maximum Affordable Monthly Housing Expenditure*</u>	<u>Housing Cost and Type of Unit</u>		<u>Source</u>
		<u>Monthly Cost**</u>	<u>Type of Unit (Price)</u>	
\$5,000	\$125			
8,300 (a)	208			
10,000	250			
10,680	267	\$267 -	Census Median Rent	(e1)
11,560	289	289 -	Median Rent, Studio Apartments	(f1)
15,000	375			
18,200	455	455 -	Median Rent, All Units	(f2)
20,000	500			
23,520	588	588 -	Median Rent, 3+ Bedroom Units	(f3)
25,000 (b)	625			
27,300 (c)	683			
30,000 (b)	750			
35,000	875			
40,000	1,000			
40,880	1,022	1,022 -	Lowest House Price (\$95,000)	(g1)
45,000	1,125	1,125 -	Census Median Value (104,600)	(e2)
50,000	1,250			
52,560	1,314			
55,000	1,375			
65,080	1,627	1,627 -	Median House Price (151,203)	(g2)
101,880	2,547	2,547 -	Highest House Price (236,750)	(g3)
300,000 (d)	7,500			

(continued)



TABLE C-2: Continued

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\* The Office/Housing Production Program (OHPP) Interim Guidelines, January, 1982, define affordable housing as follows:

rental expenses not exceeding 30% of gross monthly income, adjusted for family size; and home ownership expenses not exceeding 38% of gross monthly income, adjusted for family size, including mortgage payments, property taxes, insurance, and/or homeownership association dues. For the purpose of this table, 30% of gross monthly income is used to calculate housing affordability for both renters and owners. For owners it is assumed that 8% of gross monthly income would cover property taxes, insurance, and/or homeownership association dues and other related expenses. No adjustment has been made for family size because family circumstances vary widely.

\*\* Monthly housing costs refer to rents and mortgage payments for the housing prices shown in parentheses; sources of rents and house prices are as footnoted. Monthly costs of ownership housing were calculated as monthly mortgage expenses assuming 20% down payment, 30-year mortgage, and 16% interest rate, not including insurance, property taxes, and other related housing costs.

- a. U.S. Bureau of Labor Statistics, March, 1982, "Area wage survey for the San Francisco-Oakland, California Metropolitan Area." \$9,600 was the mean 1980 income of inexperienced file clerks, one of the lowest-paid office occupations listed.
- b. The range of \$25,000 to \$30,000 is assumed to approximate the median annual income of project employees (see Bank of Canton Final EIR, EE80.296, certified July 15, 1982, for discussion of incomes).
- c. The \$27,300 income figure was derived by inflating the \$16,300 median income of downtown office workers from the 1974 SPUR survey through December, 1981 by 67% using U.S. Bureau of Labor Statistics national wage information for nonsupervisory finance, insurance, and real estate sector employees since 1974.
- d. Montgomery-Washington Building FEIR, 81.104E, certified January 28, 1982. The median salary of wage earners at 601 Montgomery St. was estimated to be \$52,560 and the highest salary for corporate officers \$300,000, according to a 1981 survey.
- e. City Planning and Information Services, "1980 Census Information," March 1982: 1. median rent      2. median noncondominium housing value  
Rental data include residential hotels whose rent levels may be substantially lower than other types of rental dwellings and may therefore have an effect on the median rent.

(continued)

TABLE C-2: Continued

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- f. Department of City Planning, "Rent Survey," 1980. Median rents are for:  
1. studio apartments      2. all units      3. 3+ bedrooms  
These data are based on a small nonrandom sample of newspaper ads and may not reflect true rental costs.
- g. San Francisco Board of Realtors, "Multiple Sales Service," October 5, 1981. (Annual data on housing sales prices includes all homes listed by the Board of Realtors that were sold from February 11, 1981 to October 1, 1981 in San Francisco):
- |                 |                 |                  |
|-----------------|-----------------|------------------|
| 1. lowest price | 2. median price | 3. highest price |
|-----------------|-----------------|------------------|

SOURCE: Environmental Science Associates, Inc.

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TABLE C-3: SUMMARY OF RECENT STUDIES ON FISCAL IMPACT OF DOWNTOWN DEVELOPMENT

STUDY, AUTHOR, DATE	PURPOSE OF STUDY	DATA SOURCES	STUDY METHODOLOGY	CONCLUSIONS
"Fiscal Concerns" in Downtown San Francisco Conservation and Development Planning Program, Phase I Study, Sedway/Cooke, et al., October 1979, pp. 56-59	To qualitatively assess the likely fiscal impact of new development in the C-3 area under Proposition 0.	SPUR STUDY (1975)	SPUR cost/revenue estimates for downtown in 1973 and for projected growth 1974-1990 were assumed. Proposition 13's effect on revenues and the possible need for increased transportation infrastructure were considered. Generalized conclusions about fiscal impact of new development were drawn.	1) After Proposition 13, "costs may exceed revenues in the downtown by as much as 25%." 2) "[N]ew downtown development will not solve the city's growing fiscal problem; without new revenue sources, development will make it worse in the long run."
Downtown Highrise District Cost Revenue Study, Arthur Andersen & Co., November 1980	To quantify for 1976-77 (pre-Prop. 13) and 1978-79 (post-Prop. 13) how much revenue the C-3-0 area generated and how much it costs to provide city services to the area.	Data compiled from city records and through conversations with city officials.	Only revenues generated within the C-3-0 and costs of providing services to the C-3-0 counted. "The principle guiding the study methodology was to calculate the amount of revenue that San Francisco would lose and the costs that could be reduced if the Downtown Highrise District were a separate city."	The C-3-0 generated \$56.79 million in 1976-77, or 61% more than the cost of city services to the area. In 1978-79, revenues were \$53.29 million, or 48% greater than costs.
"Fiscal Considerations" Appendix C, 101 Montgomery Street FEIR, Recht Hausrath & Associates, January 1981.	Generalize conclusions about how post-Proposition 13 development downtown is likely to change the City's fiscal health from what it would be without new development.	SPUR Study, city records and conversations with city officials.	Under alternative assumptions about the cost/revenue balance in existing buildings and in new buildings, the fiscal impact over time of new development was compared to that of no new development.	"[A]n on-going process of new development would improve the City's fiscal situation. This beneficial impact would cease if new development were halted. This conclusion is tentative due to uncertainties about increased Muni costs."
Downtown Highrise District Cost/Revenue Study, David Jones, February 1981.	To quantify for 1978-79 the revenues generated by businesses in the C-3-0 and the service costs imposed on the city and BART by the C-3-0.	Arthur Andersen study.	The Jones study differs from the Andersen study primarily as follows: 1) Costs of BART (but not revenues to BART) are included; 2) Only revenues paid by businesses and building owners are considered; 3) Muni deficit is computed differently; 4) Most costs estimated as percentage of revenues rather than actual service demand in the C-3-0.	The C-3-0 imposed costs of \$94.4 million on San Francisco and BART, or 125% more than the revenues the area's businesses and building owners generated to San Francisco.
Fiscal Impacts of New Downtown High-Rises on the City and County of San Francisco, Gruen Gruen + Associates, March 1981	To quantitatively estimate City revenues from the C-3-0 and costs of serving the C-3-0 in 1998, assuming the addition of 30 million square feet of building space in the C-3-0 between 1981 and 1998.	Arthur Andersen study; data compiled from city records and through conversations with City officials.	"Only direct effects are considered. Costs are only measured for services provided within the physical limits of the C-3-0 district" and revenues are limited to "taxes on buildings within the district and the activities that take place within those buildings." Assumes the Arthur Andersen study is accurate and builds upon it.	In 1980, revenues from the 39 million square feet of building space in C-3-0 were 1.66 times as large as costs. In 1998, after completion of the 30 million square feet of new space, revenues from the entire 69 million sq. ft. of C-3-0 building space would increase to 1.92 times as large as costs.

SOURCE: Recht, Hausrath and Associates

## APPENDIX D: TRANSPORTATION

TABLE D-1: VEHICULAR LEVELS OF SERVICE

Level of Service	Description	Volume/Capacity* v/c Ratio
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	0.60-
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully used and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can be generally described as very good.	0.61- 0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully used and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71- 0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81- 0.90
E	Capacity occurs at level of service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting up-stream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91- 1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.00+

\* Capacity is defined as Level of Service E.

SOURCE: San Francisco Department of Public Works, Traffic Division, Bureau of Engineering, 1965.



TABLE D-2: PEDESTRIAN FLOW REGIMEN

Flow Regime	Walking Speed Choice	Conflicts	Flow Rate	
			Average P/F/M*	V/C
Open	Free Selection	None	0.0- 0.5	0.00-0.03
Unimpeded	Some Selection	Minor	0.5- 2.0	0.03-0.11
Impeded	Some Selection	High Indirect	2.0- 6.0	0.11-0.33
Constrained	Some Restriction	Multiple	6.0-10.0	0.33-0.56
Crowded	Restricted	High Probability	10.0-14.0	0.56-0.77
Congested	All reduced	Frequent	10.0-18.0	0.77-1.00
Jammed**	Shuffle only	Unavoidable		

\*P/F/M = Pedestrians per ft. of effective sidewalk width per minute.

\*\*For Jammed Flow, the (attempted) flow rate degrades to zero at complete breakdown.

Note: Effective sidewalk width is the portion of the sidewalk which is actually used for passage. Studies of pedestrian behavior have found that pedestrians stay 1-1.5 ft. away from curbs and building faces. Sidewalk obstructions also reduce the effective sidewalk width.

SOURCE: Pushkarev, Boris and Jeffery M. Zupan, Urban Space for Pedestrians, Cambridge, MA, MIT Press, 1975.

## CUMULATIVE IMPACT ANALYSIS METHODOLOGY

### Travel Demand

Travel demand from the 16.1 million gross sq. ft. of net new cumulative office development and 535,000 gross sq. ft. of net new cumulative retail development in downtown San Francisco has been estimated using a land-use approach for trip generation. Future travel into the downtown has been assumed to be a result of construction and occupancy of downtown office and retail space. The Office of Environmental Review of the Department of City Planning (DCP) has identified office projects in the greater downtown area as being under formal review, approved or under construction. Table A-2 shows the list of projects separated by review status and includes Assessor's Block number and DCP case number for each project. Table A-3 contains the total gross sq. ft. of office and retail space for each review status category. The information contained in these tables represents the best data available from the Department of City Planning at the time of preparation of this document.

Hotel projects have not been included in the cumulative analyses because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit. Residential projects have not been included because residential travel in the downtown is generally in the contra-commute direction during peak-hours and because the office trip generation rate and modal split distribution are

predicated on the assumption that housing would be available in the City. Thus inclusion of residential projects would be double counting of project generated travel.

Existing office and retail space that would be replaced by new buildings was subtracted from the proposed new construction to better approximate the impacts the new buildings would have on transportation facilities. As shown in Table A-3, net new office and retail space is less than total new construction as a result of subtracting out existing office and retail space on sites proposed for new buildings. ("Net new" space is used to refer to the amount of new construction in excess of existing space on each site in terms of gross sq. ft. of floor space. It does not refer to net leasable or net rentable floor space).

Projections of future travel have been made using trip generation rates of 17.5 person trip ends (one-way trips) per 1,000 net leasable sq. ft. of net new office space and 100 person trip ends (pte) per 1,000 gross sq. ft. of net new retail space./1/ Gross sq. ft. of office space was converted to net leasable sq. ft. by assuming an efficiency factor of 80%. The retail space has been assumed to be primarily "ground-floor retail" which would serve the office building users. Based upon survey data collected at the Embarcadero Center, approximately 45% of the travel generated by "ground-floor retail" uses has been assumed to be oriented to the office uses on-site and is already included in the office trip generation rate. Thus, 55% of the retail trip generation has been assumed to be "new" to each site./2/

P.M. peak-hour travel from the cumulative development was assigned to modes of travel based upon the regional distribution and modal split shown in Table D-3. During the p.m. peak hour about 20% of the office travel and 10% of the retail travel was assumed to occur. Of the office travel approximately 90% (during peak-hours) was assumed to be work-related and 10% was assumed to be other travel. On a daily basis, office travel was assumed to be 57% work-related and 43% other travel./3/

To calculate vehicle trip ends, average automobile occupancies were assumed for each regional area based upon available data. Currently, commute travel to the East Bay is about 1.8 persons per vehicle; the north Bay is about 1.5 persons per vehicle; and to the Peninsula is about 1.2 persons per vehicle./4/ San Francisco auto occupancy was assumed to be 1.4 persons per vehicle./5/

A basic assumption in all of the transportation analyses is that existing regional distributions and modal splits would continue into the future unchanged. Thus, the implicit assumption has been made that about 40% of the future employees would live in San Francisco. If housing is not available in the City then a greater impact than noted would result on the commute corridors into the City from the North Bay, East Bay and Peninsula. If housing is not available in the City, however, the impact on the Muni would be less than noted because City residents are the majority of Muni users.

The availability of short-term parking was estimated in an area within 1,000 ft. of the project (which was assumed to represent a 5-minute walking time). Projects proposed and under construction that would generate short-term



TABLE D-3: TRAVEL DISTRIBUTION AND MODAL SPLIT

Geographic Area	OFFICE						RETAIL Travel					
	Work Travel			Other Travel			Geog.			Geog.		
	Geog. %*	Mode	%**	Geog. %*	Mode	%**	Geog. %*	Mode	%**	Geog. %*	Mode	%**
San Francisco												
Downtown/Northeast	7.0	Auto	9.0	33.0	Auto	2.0	84.0	Auto	3.0			
(East of Van Ness,		Muni	61.0		Muni	20.0		Muni	7.0			
North of Market		BART	1.0		BART	0.0		BART	1.0			
to the Embarcadero,		Walk	29.0		Walk	78.0		Walk	89.0			
South of Market to 101)												
Northwest	15.0	Auto	31.0	11.0	Auto	15.0	1.0	Auto	10.0			
(Richmond, Marina		Muni	69.0		Muni	85.0		Muni	90.0			
Western Addition)												
Southwest	13.0	Auto	29.0	13.0	Auto	12.0	2.0	Auto	10.0			
(Sunset, Parkside,		Muni	62.0		Muni	69.0		Muni	80.0			
Ingleside, Excelsior,		BART	9.0		BART	19.0		BART	10.0			
Twin Peaks, and Upper Market)												
Southeast	5.0	Auto	26.0	7.0	Auto	13.0	2.0	Auto	10.0			
(Potrero Hill, Bayview,		Muni	52.0		Muni	38.0		Muni	80.0			
Hunters Point,		BART	22.0		BART	50.0		BART	10.0			
East and South of 101)												
Peninsula												
(San Mateo and Santa	18.0	Auto	44.0	8.0	Auto	50.0	3.0	Auto	25.0			
Clara Counties)		Muni	3.0		Muni	0.0		Muni	0.0			
		BART	19.0		BART	30.0		BART	25.0			
		SamT	7.0		SamT	10.0		SamT	0.0			
		SPRR	27.0		SPRR	10.0		SPRR	50.0			
East Bay	30.0	Auto	33.0	20.0	Auto	13.0	6.0	Auto	38.0			
(Alameda and Contra		BART	37.0		BART	79.0		BART	62.0			
Costa Counties)		AC	30.0		AC	8.0		AC	0.0			
North Bay***	12.0	Auto	58.0	8.0	Auto	70.0	2.0	Auto	70.0			
(Marin and Sonoma		GGTB	35.0		GGTB	20.0		GGTB	30.0			
Counties)		GGTF	7.0		GGTF	10.0		GGTF	0.0			

\* Percent of travel with origins or destinations in each geographic area.

\*\* Percent of travel in each geographic area using listed mode of travel.

\*\*\* GGTF stands for Golden Gate Transit Bus; GGTF stands for Golden Gate Transit Ferry.

SOURCE: San Francisco Department of City Planning, TJKM, Environmental Science Associates.

parking demand within the 1,000-ft. radius area were identified and the short-term parking demand was summed to give a projection of short term demand. Long-term parking demand was based upon the number of expected work-related auto trips into the downtown. Parking supply was estimated over the greater downtown South of Market area, as travel time from parking space to final destination was no longer assumed to be the pr

reeway and bridge capacity into downtown is essentially fixed at existing levels as major construction would be required to add new capacity. Current levels of vehicle traffic on the freeway and bridge system are at or near capacity. Thus, if the projection of person trip ends in autos is assumed to be correct, the levels of vehicle occupancy would have to increase in the future as the freeway and bridge system could not handle an appreciable increase in autos at the peak hour. If vehicle occupancy were to increase, vehicle trip ends and subsequent parking demand would be less than projected. Alternately, the peak hour level of demand could spread into hours adjacent to the peak hour (as is currently happening). However, there is a finite limit as to how far the peak can spread over time and still allow business to function.

Transit demand has been projected based upon existing travel patterns and is not dependent upon the availability of transit capacity (see Table D-4). Two levels of operations (load factor) calculations have been made. One load factor has been calculated based upon existing capacity and is intended to represent conditions that would result if no improvements are made to the transit system. The second load factor is calculated based upon forecast capacity (as defined in each agency's five-year plan) and is intended to portray conditions that would result if planned, scheduled improvements are made.

### Intersection Analysis

The capacity analysis of each intersection at which a turning movement count was made utilized the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled "Intersection Capacity Measurement Through Critical Movement Summations: A Planning Tool," by Henry B. McInerney and Stephen G. Peterson, January 1971, Traffic Engineering. This method is also explained in "Interim Materials on Highway Capacity", Transportation Research Circular No. 212, Transportation Research Board, January 1980). The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified Level of Service. For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio was calculated by dividing the existing volume by the capacity at Level of Service E. Table D-1 shows the definitions of Levels of Service related to v/c ratio.



TABLE D-4: EXISTING AND PROJECTED MUNI LOAD FACTORS\* (PM PEAK HOUR -- PEAK DIRECTION)

Line	RIDERSHIP				LOAD FACTORS			
	Existing	Future w/o project	Future project	Future w/project	Existing	Future w/o project	Future w/project	Future project
1	1453	1953	14	1967	0.93	1.25	1.26	0.01
1X	640	870	6	876	1.11	1.51	1.52	0.02
2	474	663	4	667	1.10	1.53	1.54	0.02
3	520	701	5	706	1.08	1.46	1.47	0.02
4	467	630	4	634	1.08	1.46	1.47	0.02
5	981	1497	9	1506	0.94	1.43	1.44	0.01
6	544	830	5	835	0.84	1.28	1.29	0.01
7	407	621	4	625	0.77	1.18	1.18	0.01
8	657	1003	6	1009	0.74	1.13	1.14	0.01
9	468	714	4	718	0.89	1.35	1.36	0.01
11	184	280	2	282	0.64	0.97	0.98	0.01
12	451	688	4	692	0.85	1.30	1.31	0.01
14	1038	1584	10	1594	0.92	1.40	1.41	0.01
14GL	205	312	2	314	0.71	1.08	1.09	0.01
14X	344	484	3	487	0.68	0.96	0.97	0.01
15	632	923	6	929	0.88	1.28	1.29	0.01
17X	162	218	2	220	0.64	0.87	0.87	0.01
21	643	981	6	987	0.85	1.30	1.31	0.01
27	145	204	1	205	0.58	0.81	0.81	0.01
30	1415	1939	13	1952	0.92	1.26	1.27	0.01
30X	435	589	4	593	0.86	1.17	1.18	0.01
31	657	937	6	943	1.07	1.53	1.54	0.02
31X	413	561	4	565	0.96	1.30	1.31	0.01
38/L	1963	2734	19	2753	1.01	1.41	1.42	0.01
38AX	453	616	4	620	1.26	1.71	1.72	0.02
38BX	272	369	3	372	0.96	1.31	1.32	0.01
41TC	119	166	1	167	0.41	0.58	0.58	0.01
41MC	184	257	2	259	0.43	0.60	0.60	0.01
42	393	593	4	597	0.99	1.50	1.51	0.01
45	561	756	5	761	0.90	1.21	1.22	0.01
66L	555	740	5	745	0.77	1.03	1.03	0.01
71	447	682	4	686	1.10	1.67	1.68	0.02
80X	416	585	4	589	0.83	1.16	1.17	0.01
J	909	1387	9	1396	0.84	1.28	1.28	0.01
KLMN	5725	8735	54	8789	0.96	1.46	1.47	0.01

\* The load factor is the ratio of ridership to existing capacity, where capacity is calculated from the recommended maximum loading of the transit vehicles which is 150% of seated capacity. As estimates of load factors, these should be regarded as approximate. Muni cordon points, where the ridership and capacity counts were made, do not necessarily correspond precisely to the point of maximum loading on each line. The future load factors have been calculated for existing capacity and do not include any proposed capacity increases. Ridership is the average of the three most recent schedule checks for each route for the months of August 1981 to August 1982, as compiled by the Department of City Planning.

SOURCE: Department of City Planning; Environmental Science Associates, Inc.



M Ocean View - Civic Center Station

Wednesday, September 9, 1981 - 8:20 A.M. - Inbound



L Taraval - Van Ness Station

Wednesday, September 16, 1981 - 4:50 P.M. - Outbound



14 Mission - Mission St. and S. Van Ness Ave.

Tuesday, September 29, 1981 - 5:45 P.M. - Outbound



N Judah - Irving St. and Ninth Ave.

Tuesday, September 29, 1981 - 8:20 A.M. - Inbound

SOURCE: Environmental Science Associates, Inc.

FIGURE D-1: Photographs of Peak  
Muni Loading Conditions



### Employment Trend Approach to Cumulative Analysis

In this and other San Francisco EIRs, a land-use type of approach has been used to estimate the transportation impacts of both the proposed project and cumulative development. An alternate type of approach is to forecast travel demand based upon regional projections of employment share (employment trend approach)./6/ Briefly, the fundamental differences between (and limitations of) the two approaches are:/7/

The land-use approach (as it has been applied in this EIR) has used net new office space actually proposed or under construction (less space in buildings demolished to make way for new buildings) as the basis for travel generation. The land-use approach assumes that literally all of the currently proposed development in the downtown area will be constructed and fully occupied within the time frame of the 71 Stevenson St. project development and occupancy. No allowance has been made for less than 100% occupancy, for proposed developments that are never constructed, or for those which would not be occupied within the time frame of the 71 Stevenson St. project.

The employment trend approach generates a total increase in employment in downtown that has taken account of loss of employment as industries and offices move out of the City, replacement of one type of industry with another (industry shifts), as well as, replacement of existing office space with new office space. The employment trend approach makes no implicit assumptions concerning occupancy rates or actual square footage of development constructed; rather, it generates total employment increases from a standpoint which assigns jobs by metropolitan sector (area) based upon extrapolation of past trends and which considers long-term industry shifts to, within, and away from each area.

Note that neither of the two approaches has attempted to project future changes in modal split.

To illustrate the differences in projections resulting from the two approaches, Table D-5 shows the total employment projections by the two methods (and the project's share thereof), the regional distribution of trips, and Muni's share of the new transit travel (and the project's share thereof).

As shown in the table, the employment trend approach predicts about 15% fewer employees in the downtown and about 8% more riders on the Muni than does the land-use approach. The employment trend approach would thus approximate the transit demand impacts discussed on pp. 89-92 of the EIR.

Several considerations concerning both of the methods need to be noted. The land-use approach, as it has been applied in San Francisco EIR's, analyzes impacts for the p.m. peak hour, whereas the employment trend approach analyzes the a.m. peak. Several reasons exist as to why one peak (or the other) may be the better one to analyze.

First, the p.m. peak may be more useful to analyze, in that actual observation shows that the p.m. peak has a greater overall effect on the local street network and transit system in the downtown area than does the a.m. peak, as more travel takes place during the p.m. peak. Also, transit service is more

TABLE D-5: COMPARISONS OF LAND-USE AND EMPLOYMENT TREND APPROACHES

Approach	Downtown Employment Increase	Project Share*	Regional Trip Share				Muni Peak-hour Increase**	Project Share***
			S.F.	Pen.	E.B.	N.B.		
Land Use	64,400	2.0%	49%	16%	24%	11%	12,000	2.1%
Empl. Trend+ (maximum)	56,100	2.4%	50- 54%	19%	17- 21%	10%	12,900++	1.9%

NOTE: As explained in the text, comparisons between the entries for the two approaches must be made with the understanding that the land-use approach reflects increases in employment and transit demand based solely upon increases in downtown office space, while the employment trend approach reflects total increases therein based upon historical trends. The differences among the regional trip share figures reflect these and the other differences between the two approaches.

\*Employment generated by the proposed 71 Stevenson St. project, as a percent of the cumulative downtown employment increase.

\*\*The Muni peak-hour increase is a demand projection (based upon existing and long-term employment trends) that is not dependent upon available or expected transit capacity.

\*\*\*Muni peak-hour trips generated by the proposed 71 Stevenson St. project, as a percent of the cumulative downtown Muni peak-hour increase.

+These figures, represent the worst-case analysis under the employment trend approach reviewed and accepted by MTC, ABAG and Muni. Note that the land-use approach entries assume that an additional net new 16.1 million gross sq. ft. of office space will come on line by late 1990.

++Based on 54% regional trip split to San Francisco (worst-case).

inclined to differ from scheduled times during the p.m. peak than during the a.m. peak, as operational delays have had an 8- to 10-hour period over which to accumulate. Finally, the on-ramps to the freeway/bridge system are greater bottlenecks (in the p.m. peak) than are the off-ramps (in the a.m. peak).

Conversely, the peaking characteristics of the a.m. peak may be more useful in that they are much sharper than those of the p.m. peak (i.e., a greater percentage of the peak-period travel occurs during a single hour). Also, as a result of the bridge system into San Francisco, travel inbound into the City is much easier to document, as tolls are collected on the inbound direction on the Golden Gate and Bay Bridges. Finally, a greater proportion of the travel occurring during the a.m. peak is employment-related; the p.m. peak includes



shopping and pleasure trips which are not directly affected by increased office space.

- The land-use approach, as it has been used in this Draft EIR, examines the p.m. peak because it has been observed to be the worst case for congestion on the City transportation system. This analysis does not reflect the spreading of the p.m. peak that is currently occurring, as all of the new trips have been assumed to take place in a single hour.

While the land-use approach assumes all new office space is fully occupied, the assumption of a functional vacancy rate of 5% is not uncommon./6/ With 16.1 million sq. ft. of new office space assumed in the land-use approach to be occupied by 1990, a 5% vacancy would amount to approximately 805,000 sq. ft., representing 7,200 employees (at 250 sq. ft. per employee), 600 of which would ride Muni in the p.m. peak hour. This adjustment for vacancy would thus reduce Muni peak-hour impacts in the cumulative analysis stated above by these 600 riders.

The land-use approach calculations have assumed transit capacity to be fixed at existing levels. The OER memorandum/6/ points out, "It should be recognized that transportation is a more 'elastic' resource with many options for expansion including increasing existing capacity by using articulated vehicles, expanded car pool and van pool programs and increasing the peak commuter period through flex-time programs, among others."

If future office development does not occur along the lines of the past long-term trends as assumed in the employment trend approach, then the projections made in Working Paper I would be revised. The average annual growth during the period 1965-1980 was less than the growth per year proposed, approved, or under construction for the period 1980-1984. The employment trend approach assumes average growth through 1990 would be at the lower historic rate, reflecting activity fluctuations from the current rate including slowdowns due to changing business conditions.

Until a forecast exists to determine how the current decade's cycle of development may differ from the past, a judgment of the applicability of results from Working Paper I may not be made. Consequently, this EIR has retained the land-use approach and presented this comparison of the employment trend approach. Both methods should be looked upon as describing potential scenarios of future conditions.

#### NOTES

/1/ The regional distribution, office trip generation, trip purpose and peak hour percentage are from Attachment 1 of the Guidelines for Environmental Impact Review, Transportation Impacts Department of City Planning, October 1980, and the modal split assignment is from Attachment 2 supplemented by survey data collected by Environmental Science Associates, Inc.

/2/ Retail trip generation is from Trip Generation, Institute of Transportation Engineers (ITE), 1979. Rates have been adjusted from vehicle trip ends to person trip ends based upon an assumed vehicle occupancy of 1.4 persons per vehicle. The survey of retail travel was conducted by

## XII. Appendices

Environmental Science Associates at Embarcadero Center on Thursday, June 17, 1982 between 10:00 a.m. and 4:00 p.m.

/3/ The percentage of work and non-work trips is from the Guidelines (see note 1) and from Urban Travel Patterns for Hospitals, Universities, Office Buildings, and Capitols, Report No. 62, National Cooperative Highway Research Program.

/4/ East Bay auto occupancy is from data collected at the Bay Bridge toll plaza by the Metropolitan Transportation Commission; North Bay auto occupancy is from data collected at the Golden Gate Bridge toll plaza by the Golden Gate Bridge, Highway and Transportation District; Southern Peninsula auto occupancy is an estimate from CalTrans.

/5/ The occupancy rate is from The Downtown Traffic and Parking Study, San Francisco Department of Public Works, 1970.

/6/ Department of City Planning, Working Paper I, Projection of Long-Range Transportation Demand, May, 1982, prepared in cooperation with the Metropolitan Transportation Commission (MTC), the Association of Bay Area Governments (ABAG), and the Municipal Railway (Muni). Employment trend data was compiled by ABAG from trends in County Business Pattern (U.S. Department of Commerce, Bureau of the Census, March 12, 1979), with 1979 as the base year for future projections and regional distributions. Modal split data are from the 1975 Travel Survey prepared by MTC.

/7/ The Department of City Planning, Office of Environmental Review (OER), has issued a memorandum, dated July 2, 1982, dealing with the subject of the differences in the land-use and employment trend approaches, and recommending that both approaches be used in future EIRs to give a more balanced assessment of future peak transportation demand. This memorandum is on file with and available from the Office of Environmental Review, 450 McAllister St., 5th Floor. The memorandum calls out some of the fundamental differences between the two approaches and also details the limitations of each approach.



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APPENDIX E: PROBABLE SEQUENCE OF SEDIMENT LAYERS WITH DEPTH

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<u>Geologic Material</u>	<u>Approximate Elevation of Bottom of Layer*</u> <u>(feet below San Francisco Datum)</u> (ground surface at +9 to +13)
artificial fill	+0.5 to +1.0
wind blown sand	-19
Upper Bay mud	-29 to -39
dense sand	-75**
Lower Bay clays	-215
bedrock surface	-215

\*The elevations are approximate; the geologic units are mostly of uniform thickness. Bedrock elevation is at the top of the layer.

\*\*Data on the depth of the materials below the dense sand are inferred from information about the geologic sequence in the vicinity. Borings at the site extended no deeper than Elevation -75.5 ft.

SOURCE: Lee and Praszker, 1982

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APPENDIX F: PROJECTS INCLUDED IN COMPARATIVE ANALYSIS OF ENERGY CONSUMPTION

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101 Montgomery	456 Montgomery
Howard & Main	101 Mission
595 Market	Spear/Main
505 Sansome	Post/Kearny
180 Montgomery	135 Main
Golden Gateway	Pacific III
Pacific Gateway	Washington/Montgomery
Daon Building	Bank of Canton
(Battery and Sacramento)	

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SOURCE: Environmental Science Associates

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APPENDIX G: EMERGENCY CARE FACILITIES

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Centers for Casualty Care and Mass Care have been designated by the Mayor's Office of Emergency Services:

CASUALTY CARE FACILITY May be either a Hospital with full capabilities for surgery, X-ray, laboratory, etc., for treating major injuries; or a First Aid Station with lesser capabilities, for treating less-severe injuries. These facilities comprise both private and public agencies.

MASS CARE FACILITY A location such as a school, from which lodging, feeding, clothing, registration, welfare inquiry, first-aid and essential social services can be provided to disaster victims during the immediate post-disaster period. Operated by the Red Cross, Department of Social Services, School District, Park and Recreation Department, University of San Francisco, and Salvation Army.

The CASUALTY CARE FACILITIES closest to the project:

San Francisco City Clinic, 250 4th Street.  
South of Market Health Center, 551 Minna.

The MASS CARE FACILITY closest to the project:

Moscone Center.

SOURCE: City & County of San Francisco Earthquake Response Plan, Mayor's Office of Emergency Services

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APPENDIX H

FINAL INITIAL STUDY\*  
71 STEVENSON STREET  
SAN FRANCISCO  
81.493E  
JANUARY, 1982

\* Differences among data presented in the following Initial Study and the preceding focused EIR are attributable to the availability of additional and more precise data during the subsequent preparation of the EIR.





# DEPARTMENT OF CITY PLANNING

100 LARKIN STREET · SAN FRANCISCO, CALIFORNIA 94102

(415) 552-1134

## NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: January 22, 1982

Lead Agency: City and County of San Francisco, Department of City Planning  
100 Larkin Street, San Francisco, CA. 94102

Agency Contact Person: Sally E. Maxwell

Tel: (415) 552-1134

Project Title: 81.493E  
71 Stevenson Street  
Office Building

Project Sponsor: Highfield Corporation, Ltd.

Project Contact Person: Peter Gordon,  
Gensler and Associates

Project Address: 71 Stevenson Street

Assessor's Block(s) and Lot(s): Lots 28 and 29 in A/B 3708

City and County: San Francisco

Project Description: Construct a 24-story, 370,000 gross square foot building with about 302,000 sq.ft. of office, 7,000 sq.ft. of retail and 35 parking spaces; requiring removal of 2 buildings and Discretionary Review.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15081 (Determining Significant Effect), 15082 (Mandatory Findings of Significance) and 15084 (Decision to Prepare an EIR), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Deadline for Filing of an Appeal of this Determination to the City Planning Commission: February 1, 1982.

An appeal requires 1) a letter specifying the grounds for the appeal, and 2) a \$35.00 filing fee.

Alec S. Bash, Environmental Review Officer

INITIAL STUDY  
71 Stevenson Street Office Building

81.493 E

PROJECT DESCRIPTION

The proposed project is a 24-story office building located on Lots 28 and 29 of Assessor's Block 3708 and is situated on the central portion of the block bounded by Stevenson, Jessie, Second and Ecker Streets (See Figure 1, page 3). The site is in the C-3-0 (Downtown Office) Zoning District, in which the maximum permitted Floor Area Ratio (FAR) is 14 to 1, and the 700-I Height and Bulk District. The site contains 24,710 square feet. The site itself is currently occupied by a parking garage at 71 Stevenson Street (rated "C" in the Heritage Survey) and a warehouse at 64 Jessie Street (rated "B"). Surrounding land uses include office buildings with ground floor retail space, educational and related uses, parking lots and warehouses.

The project would consist of a 24-story office tower (including a penthouse mechanical floor) with one subsurface parking level. Retail shops would be located on the ground level and mezzanine level, with floors 2-23 for office use; the 24th floor would contain mechanical space. The building would rise to a maximum height of 332 feet. The project would contain about 370,000 total gross sq. ft.: 302,000 sq. ft. for office use, 7,000 sq. ft. for retail use, 23,000 sq. ft. for parking and 38,000 sq. ft. for building services. Thirty-five parking spaces would be provided on the subsurface level and three truck berths would be located at ground level.

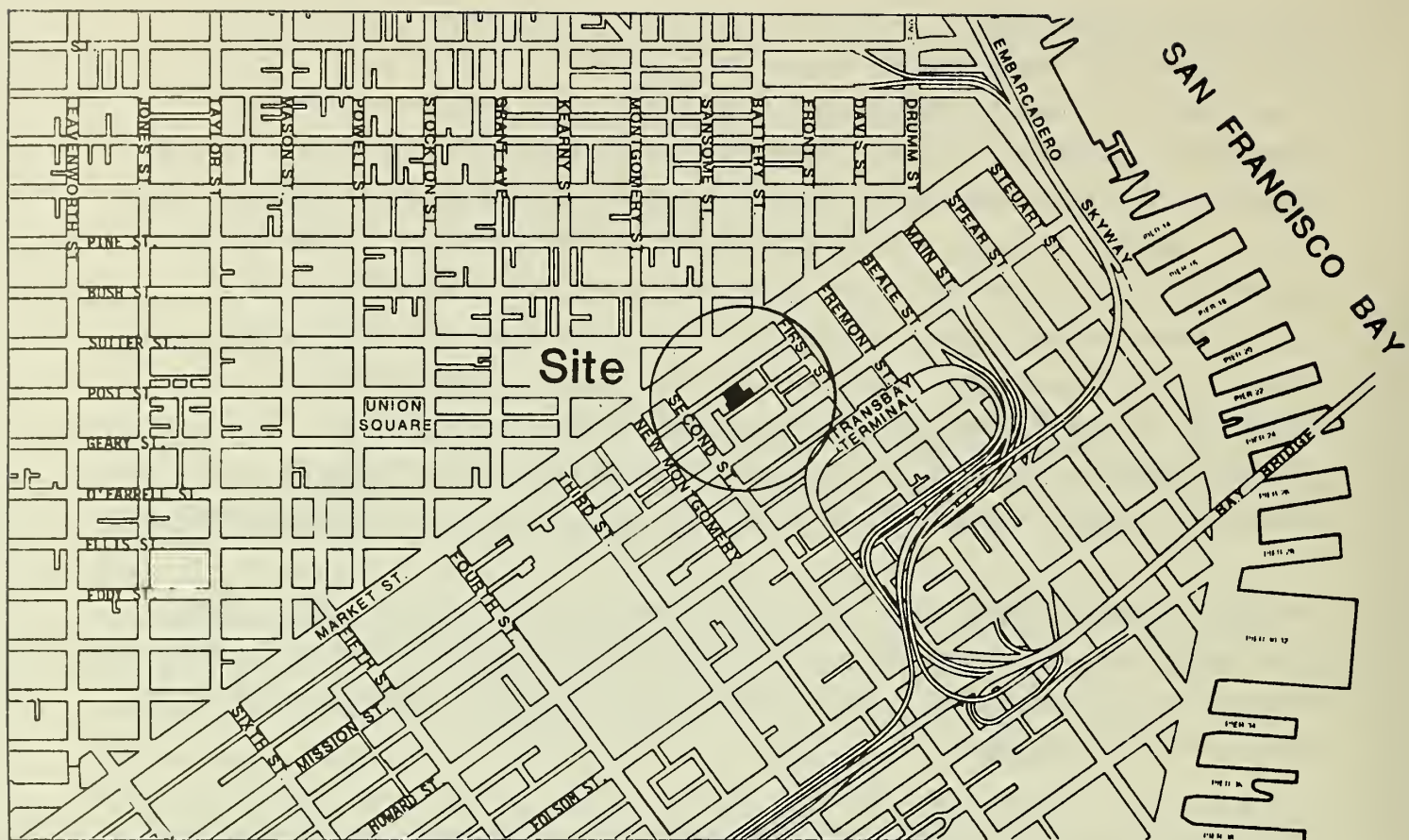
Pedestrian access to the project would be provided by a main entrance on Stevenson Street and two additional building entrances on Jessie Street. Vehicular access to the subsurface parking level would be from Stevenson Street and loading dock facilities would be provided on Jessie Street (see Figure 2, page 4).



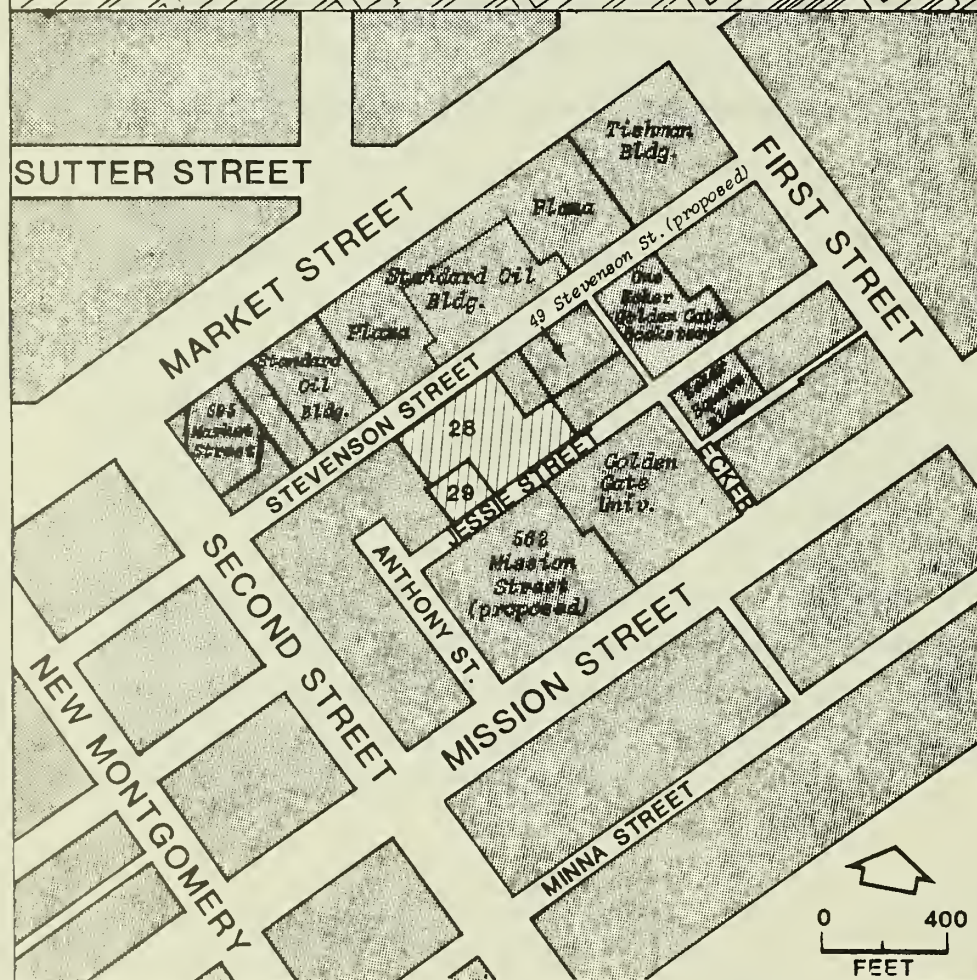
The project design would consist of an off-set tower scheme in which the building massing would be arranged in two unequal portions; that with the larger footprint would rise several floors above the smaller portion to accommodate mechanical spaces. Two opposite corners of the building would be rounded to minimize view obstruction from nearby buildings (see Figures 3 and 4, pp. 5 and 6). A landscaped plaza located at the southwest corner of the project would be linked with the Stevenson Street building entrance by a retail arcade, establishing pedestrian access from Stevenson Street to Jessie Street through the project site. The project would provide a connection to a mid-block pedestrian passage being considered by Lincoln Properties as part of a proposed 32-story office building at 562 Mission Street (located south of the project site across Jessie Street).

Exterior surfacing would be polished stone and a glass curtain wall. Clear glass would be used at the ground level and tinted and colored glass on the above-ground office floors. The project would contain no reflective glass or high-intensity lighting.

The project sponsor is Highfield Development Colorado, Inc., a subsidiary of Highfield Corporation Ltd., which is a Canadian corporation based in Vancouver, British Columbia. Project architects are Gensler and Associates, San Francisco, California.



Above: Site Location



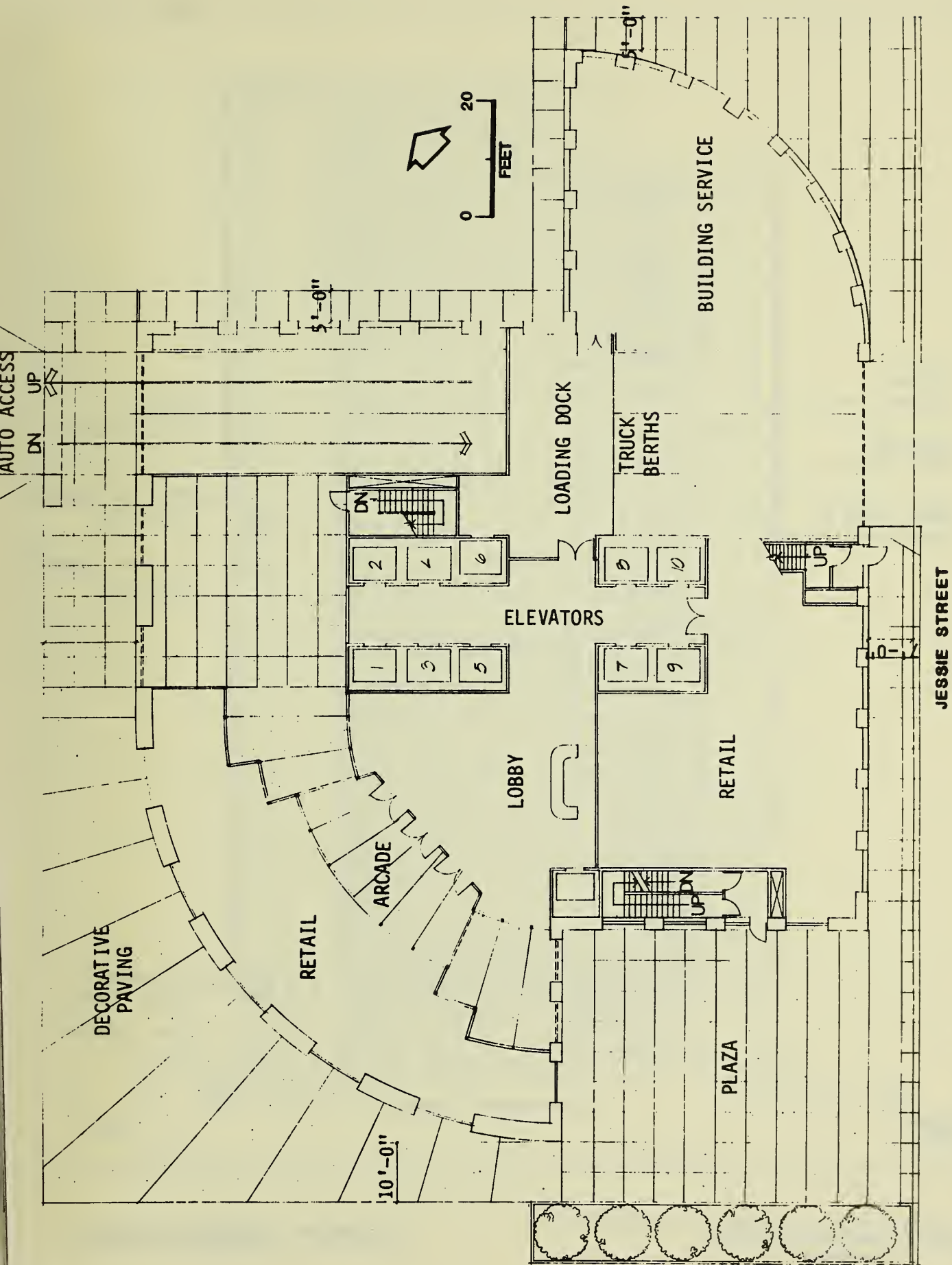
Left: Lot / Block Plan

//// Site

FIGURE 1: Project Site and Vicinity

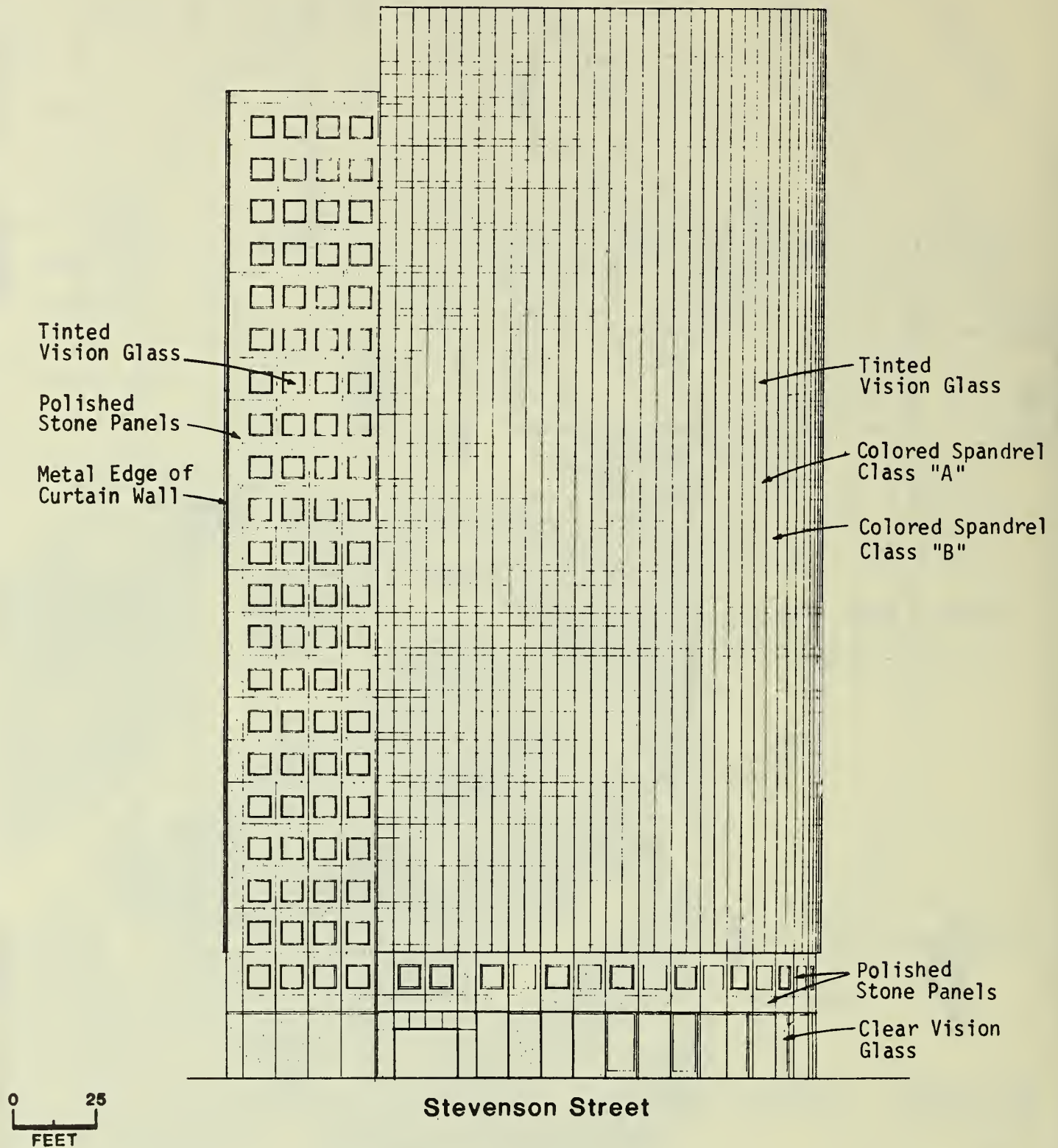
SOURCE: Environmental Science Associates, Inc.





SOURCE: Gensler & Associates, Architects

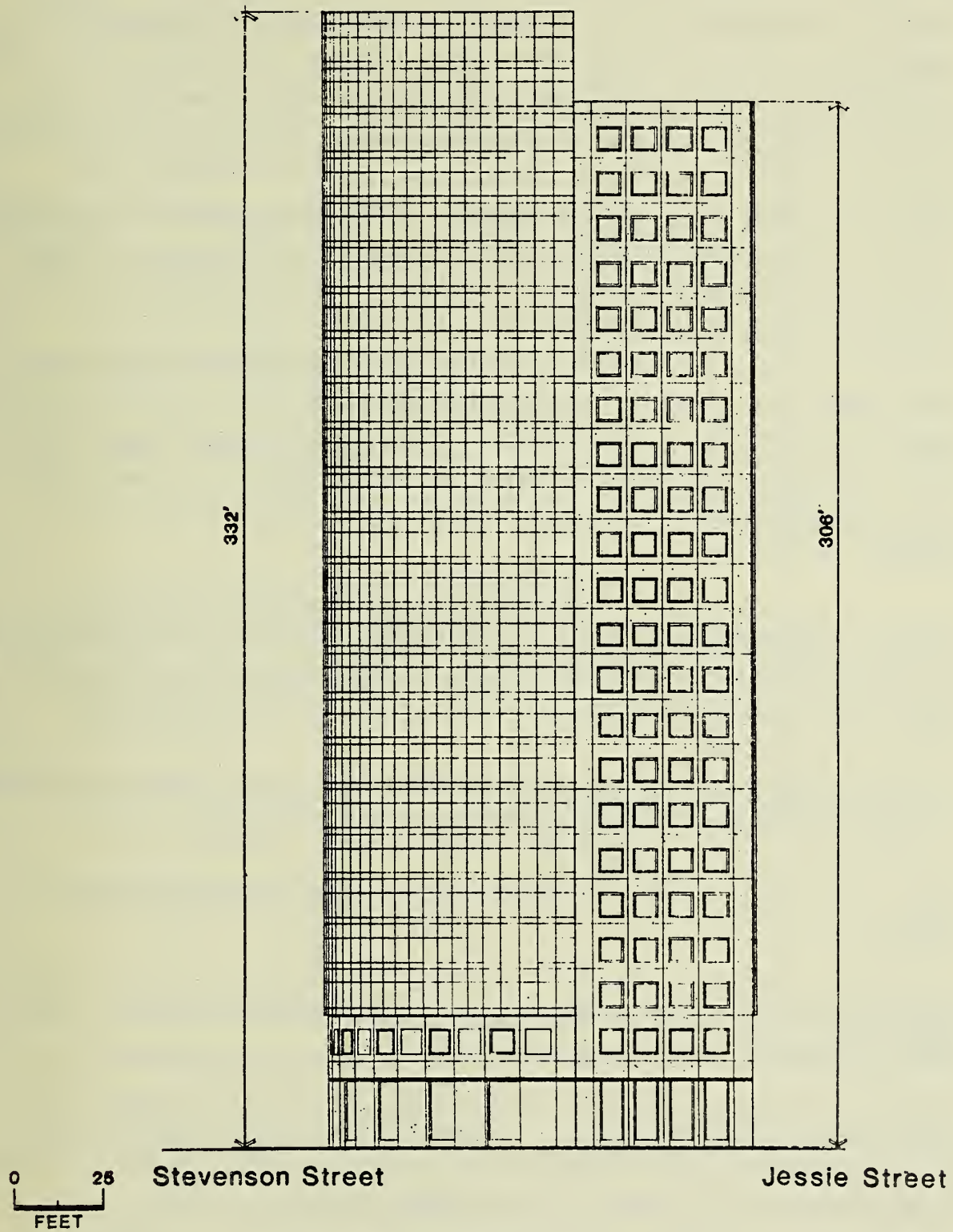
FIGURE 2: Ground Floor Plan



SOURCE: Gensler & Associates,  
Architects

FIGURE 3: Northwest Elevation





SOURCE: Gensler & Associates,  
Architects

FIGURE 4: Southwest Elevation

## SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

Potential environmental issues include: relationship of the project to the Comprehensive Plan; historical and cultural effects (the project would require the demolition of "B" and "C" rated buildings); tenant relocation for the Stevenson Street Garage; view obstruction; shadow effects (the project would increase shadows on the Chevron Garden Plaza); vehicle circulation and parking, and effects on existing vehicular and transit systems; construction noise and vibrations (piledriving would be required); glass panels falling from the project onto the street as a result of seismic activity; building evacuation procedures in the event of an emergency; dewatering and its possible effects on surrounding buildings; and increased demand for housing attributable to the project. The project would contribute to effects from cumulative development in the project vicinity in the categories of traffic, noise, air quality, energy consumption and growth induction. These issues will be covered further in an Environmental Impact Report (EIR) for the project.

Potential environmental issues of the proposed project that were determined to be insignificant, and therefore will not be addressed in the EIR for the project, are described below.

Land Use Compatibility: The project would be similar to existing and proposed land uses in the vicinity of the site.

Glare: The project would contain no reflective glass or high-intensity lighting.

Operational Noise: After completion, the project would not increase noise levels perceptibly in the project vicinity.

Construction-Related Air Quality: Construction of the project would have short-term effects on air quality in the project vicinity. Measures included in the project would partially mitigate these effects.

Utilities and Public Services: The increased demand for public services and utilities attributable to the project would not require additional personnel or equipment.



Biology: The project would have no direct effect on plants or animals as the site is presently covered by buildings.

Land: Appropriate construction measures included in the project would mitigate any potentially hazardous geologic or soil conditions on the site.

Hazards: The project would not increase the risk of explosion or release of hazardous substances or create a potential health hazard.

## ENVIRONMENTAL EVALUATION CHECKLIST

### A. GENERAL CONSIDERATIONS

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
1. Would the project conflict with objectives and policies in the Comprehensive Plan (Master Plan) of the City?	_____	<u>  X  </u>	_____	_____	<u>  X  </u>
2. Would the project require a variance, or other special authorization under the City Planning Code?	<u>  X  </u>	_____	_____	_____	<u>  X  </u>
3. Would the project require approval of permits from City Departments other than DCP or BBI, or from Regional, State or Federal Agencies?	_____	_____	<u>  X  </u>	_____	_____
4. Would the project conflict with adopted environmental plans and goals?	_____	_____	<u>  X  </u>	_____	_____

The project would respond to Objective 1; Policy 1, Objective 6; Policies 1 and 2, and Objective; 7, Policies 2 and 3 of the Commerce and Industry Element of the Comprehensive Plan by providing office and retail space and employment in the downtown core of San Francisco on a site that is close to local and regional transit lines and facilities.

The project would require the demolition of the 64 Jessie Street warehouse, given a "B" rating by the Foundation for San Francisco's Architectural Heritage Survey, and the 71 Stevenson Street parking garage, given a "C" rating by the Heritage Survey, and thus would not respond to Objective 2;

Policy 4 of the Urban Design Element, which seeks to "preserve notable landmarks and areas of historic, architectural or aesthetic value...".

The project would provide new parking in the downtown control area, and thus would not respond to Objective 1; Policies 3 and 4 of the Downtown Transportation Plan of the Transportation Element. The project would replace a 290-car parking garage with 35 parking spaces, an overall reduction of 255 parking spaces.

The relationship of the project to the Comprehensive Plan will be assessed in an Environmental Impact Report (EIR).

The project would comply with the pertinent provisions of the City Planning Code including the 14:1 Floor Area Ratio (FAR) (the project would have a total floor area of 345,940 net square feet which would be equal to the maximum FAR allowable in the district); the 700-1 height and related bulk limits (the project would be 332 feet high, 368 feet below the maximum height permitted in the district); uses permitted in the C-3-0 Zoning District (the project would include office and retail uses, parking and loading facilities; additionally, up to 197 housing units would be permitted). The project would require Discretionary Review by the City Planning Commission's Resolution 8474.

B. ENVIRONMENTAL IMPACTS:

1. <u>Land Use.</u> Would the proposed project:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Be different from surrounding land uses?	_____	_____	<u>X</u>	_____	<u>X</u>
b. Disrupt or divide the physical arrangement of an established community?	_____	_____	<u>X</u>	_____	<u>X</u>

The project site is located in the Downtown Financial District and is surrounded by office buildings with ground floor retail space, commercial buildings, educational and related uses, parking lots and warehouses. North across Stevenson Street from the site are the 22- and 44-story Standard Oil (Chevron) towers and sunken garden/plaza. Other newer buildings include a highrise office building at 525 Market Street and another office tower at



595 Market Street. Golden Gate University and related buildings are located on Mission Street south of the site. The Ecker Square building (about 19 stories) with ground-level plaza is under construction east of the site. Other nearby structures are three to eight stories in height and generally built to lot lines. The project site contains a two-story parking garage at 71 Stevenson Street and a five-story vacant warehouse building at 64 Jessie Street.

2. <u>Visual Quality and Urban Design.</u>	Would the proposed project:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a.	Obstruct or degrade any scenic view or vista open to the public?	_____	_____	<u>X</u>	_____	<u>X</u>
b.	Reduce or obstruct views from adjacent or nearby buildings?	<u>X</u>	_____	_____	_____	<u>X</u>
c.	Create a negative aesthetic effect?	_____	<u>X</u>	_____	_____	<u>X</u>
d.	Generate light or glare affecting other properties?	_____	_____	<u>X</u>	_____	<u>X</u>

The building would not obstruct any scenic views or vistas now available to the public. Most views from nearby buildings would not be affected because of existing and approved taller developments, but some views from the south side of the Standard Oil buildings would be obstructed below the 22nd floor. View obstruction will be assessed in an Environmental Impact Report.

The project would require the demolition of the warehouse at 64 Jessie Street, rated "B" by the Foundation for San Francisco's Architectural Heritage Survey, and the parking garage at 71 Stevenson Street, rated "C" by the Heritage Survey; neither building was included in the Department of City Planning's Architectural Resource Inventory. The building would increase the amount of shadow cast on the Chevron Garden Plaza located north of the project across Stevenson Street and might increase the amount of shadow cast on the Tishman Building Plaza located northeast of the project across Stevenson Street. Further discussion and graphics relevant to the appearance of the project will appear in an EIR.

The project would contain no reflective glass or high-intensity lighting and hence would not impose reflective or glaring light on other properties.

3. <u>Population/Employment/Housing.</u> Would the proposed project:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Alter the density of the area population?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>
b. Have a growth-inducing effect?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>
c. Require relocation of housing or businesses, with a displacement of people, in order to clear the site?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>
d. Create or eliminate jobs during construction, operation, and maintenance of the project?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>
e. Create an additional demand for housing in San Francisco?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>

The project would increase the number of daily employees on the site from between four and five to approximately 1320. Direct and indirect growth-inducing effects would result from the higher level of employment on the project site and the subsequent need for housing and various support services. Three to four employees would be displaced from the garage at 71 Stevenson Street. One employee would be displaced from the warehouse at 64 Jessie Street. Relocation measures have not been determined. During construction a total of about 125 person-years of employment would be created, with an average of 77 workers employed at any time. Under the current housing formula used by the Department of City Planning, the project would be expected to generate a demand for approximately 265 housing units in San Francisco./1/ The cumulative effects of growth inducement (including housing demand and direct and indirect employment generated) will be assessed in the Environmental Impact Report.

#### NOTES - Population/Employment/Housing

/1/ Dean Macris, Department of City Planning, Memorandum dated July 20, 1981. The formula is as follows:  $\frac{302,000}{250} \times .22 = 265$



4. <u>Transportation/Circulation.</u> Would the construction or operation of the project result in:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Change in use of existing transportation systems (transit, roadways, pedestrian ways, etc.)?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>
b. An increase in traffic which is substantial in relation to existing loads and street capacity?	<u>      </u>	<u>X</u>	<u>      </u>	<u>      </u>	<u>X</u>
c. Effects on existing parking facilities, or demand for new parking?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>
d. Alteration to current patterns of circulation or movement of people and/or goods?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>
e. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	<u>      </u>	<u>      </u>	<u>X</u>	<u>      </u>	<u>X</u>
f. A need for maintenance or improvement or change in configuration of existing public roads or facilities?	<u>      </u>	<u>X</u>	<u>      </u>	<u>      </u>	<u>X</u>
g. Construction of new public roads?	<u>      </u>	<u>      </u>	<u>X</u>	<u>      </u>	<u>      </u>

The project would result in an increased use of existing transportation systems: both freeways, bridges and local streets and the transit systems which serve Downtown San Francisco. The project would generate a parking demand that would be met partially by on-site parking. The EIR will contain an analysis that would include projections of the number of passenger and freight vehicle trips generated by the proposed project, the impacts of such traffic on streets, bridges, freeways and intersections, a projection of parking and loading needs (including effects of the removal of the existing parking garage), the effects of the project on pedestrian movements in the project vicinity, and the project impacts and cumulative impacts on the local Muni transit routes and on regional systems.

The project could require improvements to fronting streets and alleys because of increased pedestrian use. The project would require no change in the present pattern of circulation nor in the configuration of existing public streets.

5. Noise.

	<u>Yes</u>	<u>Maybe</u>			
a. Would the proposed project result in generation of noise levels in excess of those currently existing in the area?	<u>X</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>X</u>
b. Would existing noise levels impact the proposed use?	<u>      </u>	<u>      </u>	<u>X</u>	<u>      </u>	<u>X</u>
c. Are Title 25 Noise Insulation Standards applicable?	<u>      </u>	<u>      </u>	<u>X</u>	<u>      </u>	<u>      </u>

Construction activities, particularly piledriving, would temporarily increase noise levels in the project vicinity; piledriving would also cause vibrations. Noise and vibration effects of construction activities, including possible concurrent construction activities from Central Plaza, 562 Mission Street and the project, will be analyzed in the Environmental Impact Report.

Noise levels in the area would not be expected to exceed currently existing levels as a result of project operation. Mechanical equipment noise is regulated by the San Francisco Noise Ordinance, (Part II, Chapter VII, San Francisco Municipal Code), Section 2909, "Fixed Source Noise Levels", with which the project sponsors are required to comply. In the C-3-0 District, the ordinance restricts equipment noise levels at the property line to 70 dBA between 7 a.m. and 10 p.m., and 60 dBA between 10 p.m. and 7 a.m. As 24-hour equipment noise levels would be limited to 60 dBA to meet the nighttime limit, they would not be perceptible within the sound-level context of the project. Further discussion will not be included in the EIR.

Traffic generated by the project during any hour of the day would cause traffic noise to increase by less than 1 dBA; a 1 dBA increase in environmental noise is undetectable by the untrained human ear./1/ Increased noise levels would be generally imperceptible because of existing noise levels on First, Market, and Mission Streets. Noise levels generated by traffic from cumulative development in the project vicinity will be analyzed in the EIR.

The Environmental Protection Element of the Comprehensive Plan indicates an existing day-night average noise level (Ldn) of 70 dBA for First Street and for Market Street east of First Street, and 75 dBA for Mission Street and



Market Street west of First Street. For office use the guidelines recommend no special noise control measures in an exterior noise environment up to an Ldn of 70 dBA. The exterior noise levels at the site are estimated to be 70 to 75 dBA. For these noise levels, the guidelines require an analysis of noise reduction requirements and inclusion of noise insulation features in building design. As this will be done by the project sponsor, no further analysis will be included in the EIR.

#### NOTES - Noise

/1/ This conclusion is based on the findings of the Five Fremont Center Final EIR, EE 80.268, certified March 12, 1981, page 119. Five Fremont is a larger project than the 71 Stevenson Street project, and the number of parking spaces is greater than for the proposed project. Noise from traffic generated by the Five Fremont project was projected to cause a less than 1 dBA increase.

6. <u>Air Quality/Climate.</u> Would the proposed project result in:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Violation of any ambient quality standard or contribution to an existing air quality violation?	_____	<u>  X  </u>	_____	_____	<u>  X  </u>
b. Exposure of sensitive receptors to air pollutants?	_____	<u>  X  </u>	_____	_____	<u>  X  </u>
c. Creation of objectionable odors?	_____	_____	<u>  X  </u>	_____	_____
d. Burning of any materials including brush, trees, or construction materials?	_____	_____	<u>  X  </u>	_____	_____
e. Alteration of wind, moisture, or temperature (including sun shading effects), or any change in climate, either locally or regionally?	_____	<u>  X  </u>	_____	_____	<u>  X  </u>

Concentrations of carbon monoxide, hydrocarbons and nitrogen oxides would increase as a result of increased project-related traffic. Individually, these incremental changes in air pollution in the region would be insignificant; cumulatively, developments such as this could increase reported concentrations and the frequency of standard violations. Cumulative air quality issues will be assessed in the EIR.

The project would result in new shadows on the Chevron Garden Plaza and possibly the Tishman Building Plaza. Shadow effects of the project will be analyzed in the EIR.

There are no significant sensitive receptors, such as hospitals, within a mile of the area. Possible sensitive receptors in the area would be individuals with respiratory problems passing through the area, people working in the area or students attending classes at Golden Gate University (located southeast of the project).

Construction activities would cause temporary excesses in the project vicinity of the California standard of 100 micrograms per cubic meter for suspended particulates (dust), the principal air pollutant of construction activities. Except to persons with respiratory problems, large-size particulates are more a nuisance than a hazard, and settle out of the atmosphere rapidly with increasing distance from the source. This is in contrast to gaseous pollutants and to small-size particulates from combustion and earthmoving. Diesel-powered construction equipment would emit, in decreasing order by weight, nitrogen oxides, carbon monoxide, sulfur oxides, hydrocarbons, and particulates. This would increase local concentrations temporarily but would not be expected to increase the frequency of violations of air quality standards. As the project sponsor would agree to include measures in the project that would partially mitigate these effects, construction-related air quality will not be discussed in the EIR.

The project would have minimal effect on wind conditions at ground level. The project is located behind much taller buildings (595 Market Street and the Standard Oil buildings at 573 - 575 Market Street) and would receive protection from northwesterly and westerly winds. Due to its location, the project would provide wind shelter to the Chevron Garden Plaza, blocking northwesterly winds and, consequently, reducing wind speeds in the plaza. Additionally, the project would provide wind shelter to pedestrian areas along Jessie Street. Because of the project's sheltered location, there is no need for mitigation of wind impacts. The project design would reduce wind impacts at ground level. The curved west-corner of the building would render it more "streamlined" to westerly winds thereby reducing accelerations at ground



level. Thus, the project does not appear to have the potential to create strong wind accelerations at ground level, and wind tunnel tests would not be needed./1/

#### NOTES - Air Quality/Climate

/1/ Based on a summary of a qualitative wind analysis performed on the site and for the project by Donald Ballanti, a certified meteorologist, on November 13, 1981. A copy of the analysis is on file at the Department of City Planning's Office of Environmental Review.

#### 7. Utilities and Public Services. Would the Yes Maybe No N/A Disc. proposed project:

- a. Have an effect upon, or result in a need for, new or altered governmental services in any of the following?

fire protection	_____	_____	X	_____	X
police protection	_____	_____	X	_____	X
schools	_____	_____	X	_____	X
parks or other recreational facilities	_____	_____	X	_____	X
maintenance of public facilities	_____	_____	X	_____	X
power or natural gas	_____	_____	X	_____	X
communications systems	_____	_____	X	_____	X
water	_____	_____	X	_____	X
sewer/storm water drainage	_____	_____	X	_____	X
solid waste collection and disposal	_____	_____	X	_____	X

The project by itself would not cause a need for development of new services; however, cumulative downtown development could result in a need for new or altered services.

The project would incorporate more extensive fire protection measures than the existing older buildings on the site because of more stringent code standards now in effect. The project would increase the building area and the number of persons using the site. The project would not result in the need for additional Fire Department equipment or personnel except in the cumulative sense, in the event of a major fire or disaster. The existing fire pressures and flow are adequate to serve the proposed project./1/

New highrise buildings are required to conform with the Life Safety provisions of the San Francisco Building Code. The Code requires that all new highrise

buildings be equipped with automatic fire sprinklers throughout, as well as with a fire alarm system, emergency power and special elevator controls. Automatic sprinklers are effective in extinguishing flames before they spread throughout the building and, consequently, the chances of fire spreading from building to building is remote. Thus, replacing older, more vulnerable low occupancy buildings, with higher quality, greater occupancy highrise buildings probably has no measurable effect on the need for fire protection./2/

The project site is within the Southern Police District. The Southern Station is located in the Hall of Justice at 850 Bryant Street. The site area is patrolled by radio-dispatched patrol cars 24 hours a day. Foot beats are assigned to Market Street west of the site but not directly in front of the site. The proposed project would increase the daytime population and the amount of property on the site, thus increasing the potential for crime. The Police Department indicates that the project would not result in the need for additional personnel or equipment. If statistics later indicated such a need, additional personnel would be assigned to the site area./3/

The project would not affect area schools. San Francisco public schools have experienced a reduction in school enrollment over the past several years and could accommodate any increase in school-age children from the housing which would be required as a condition of project approval./4/

The project would generate a demand for urban recreational facilities such as plazas and urban parks. The project would include a landscaped plaza which would connect with a retail arcade providing pedestrian access from Jessie Street to Stevenson Street. The Chevron Garden Plaza is located north of the project site (although it is not currently open to the public); and the Tishman Building Plaza is located northeast of the project site. In addition, landscaped plazas are included in the proposed Central Plaza project and the recently approved Five Fremont Center east of the project site.

The project would have no direct effect on the maintenance of public facilities.



The project would result in a net increase in consumption of energy; it would conform to California energy standards for nonresidential buildings. The project would probably be served by power lines and gas mains under Second Street. No capacity or supply problems exist./5/

The project would result in increased use of communication systems. No supply or capacity problems exist./6/

The project would generate an average demand for about 39,000 gallons per day (gpd) of water./7/ The site is served by two eight-inch mains, one under Jessie Street and another under Stevenson Street. There would be no supply or capacity problems./8/ Existing sewer lines could accommodate wastewater generated by the project. Because of increasing high-rise development occurring south of Market Street, the Bureau of Sanitary Engineering of the Public Works Department has undertaken a study to determine if the five-year storm capacity of the wastewater collection and treatment system would be reduced by new high-rise developments. It is not known when this study will be available./9/

The project would generate a net increase of about 1.5 tons of solid waste per day./10/ A trash compactor would be provided. Collection would not be a problem and would probably occur daily./11/ Disposal effects would depend on the eventual selection of a disposal method and/or site for San Francisco's solid wastes./12/

#### NOTES - Utilities and Public Services

/1/ Chief Joseph Sullivan, Support Services, San Francisco Fire Department, letter communication, October 29, 1981.

/2/ Bendix Environmental Research, Inc. Environmental Consultants and Fire Protection Engineers. Information contained in this section was confirmed by Emmet D. Condon, Deputy Chief, San Francisco Fire Department, September 24, 1981.

/3/ Sergeant Paul Libert, Planning and Research Division, San Francisco Police Department, telephone communication, October 23, 1981 and letter communication December 21, 1981.

/4/ San Francisco Unified School District, Proposal for Leasing and Selling Vacant Property, April 29, 1980, pp. 28 and 29.

/5/ George Pavana, Pacific Gas and Electric, telephone communication, October 23, 1981.

/6/ Skip Simpson, Facilities Engineer, Pacific Telephone Company, telephone communication, October 23, 1981.

/7/ Yerba Buena Center Final EIR, Appendices, EE77-220, certified April 25, 1978, p. 49. The calculation was based on a water consumption rate of 125 gallons per 1,000 sq. ft. per day.

/8/ Harlow Swain, Senior District Water Serviceman, Engineering Department, San Francisco Water Department, telephone communication, October 23, 1981.

/9/ Mervyn Francies, Engineering Associate II, Bureau of Sanitary Engineering, telephone communication, October 23, 1981.

/10/ Solid Waste Management Board Solid Waste Generation Factors in California, Bulletin No. 2, July 8, 1974. The amount of solid waste generated was based on a rate of 1 lb. per 100 sq. ft. per day.

/11/ Fiore Garbarino, Office Manager and Treasurer, Golden Gate Disposal Company, telephone communication, November 9, 1981.

/12/ Several new landfill sites are currently under consideration by the Board of Supervisors in addition to establishing a comprehensive recycling program and the possibility of constructing a waste-to-energy plant. Roger Boas, Chief Administrative Officer, Memorandum dated February 24, 1981.

8. Biology.

Yes   Maybe   No   N/A   Disc.

a. Would there be a reduction in plant and/or animal habitat or interference with the movement of migratory fish or wildlife species?

\_\_\_\_\_   \_\_\_\_\_   X   \_\_\_\_\_   \_\_\_\_\_

b. Would the project affect the existence or habitat of any rare, endangered or unique species located on or near the site?

\_\_\_\_\_   \_\_\_\_\_   X   \_\_\_\_\_   \_\_\_\_\_

c. Would the project require removal of mature scenic trees?

\_\_\_\_\_   \_\_\_\_\_   X   \_\_\_\_\_   \_\_\_\_\_

9. Land (Topography, Soils, Geology). Would proposed project result in or be subject to:

a. Potentially hazardous geologic or soil conditions on or immediately adjoining the site (slides, subsidence, erosion, and liquefaction)?

X   \_\_\_\_\_   \_\_\_\_\_   \_\_\_\_\_   X

b. Grading (consider height, steepness, and visibility of proposed slopes; consider effect of grading on trees and ridge tops)?

\_\_\_\_\_   \_\_\_\_\_   X   \_\_\_\_\_   \_\_\_\_\_



	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
c. Generation of substantial spoils during site preparation, grading, dredging or fill?		<u>X</u>			<u>X</u>

The site is in an area classified as a special geologic study area by the Community Safety Element of the Comprehensive Plan because of potential ground failure hazards. Under Policy 4 of the Community Safety Plan, the project sponsor would be required to conduct a geologic and soil engineering site investigation and comply with any compensating structural design recommendations based on the investigation's findings. During construction, the project sponsor would be required to comply with the San Francisco Building Code and the Excavation Standards of the California Occupational Safety and Health Agency. Section 2903.4 of the Building Code specifies that "The foundation type for any building or structure shall be selected with due consideration given to subsurface conditions and requirements for the structural behavior." Additionally, the structural design of the building would be required to meet the minimum safety requirements for lateral seismic forces (San Francisco Building Code, Section 2313 and Section 2314.D.1). As this will be done by the project sponsor, no further analysis is needed in the EIR.

The effects of seismic activity on the glass panels contained in the curtain wall of the building is not known at this time and will be analyzed in the EIR.

The two existing buildings on the site have basements graded to property lines: the warehouse at 64 Jessie Street has a two and one-half foot depth basement, and the basement of the parking garage at 71 Stevenson Street ranges in depth from four feet-one inch at the Stevenson Street side to two feet-four inches at the Jessie Street side. The project design specifies a twelve and one-half foot basement which would extend a maximum of eight feet-five inches below the basement levels of the two existing buildings. This would result in the generation of about 77,600 cubic feet of soil and debris during excavation. Demolition of the two buildings on the site would result in spoils of concrete, masonry and other used building materials which would be disposed of in an approved disposal site.

10. <u>Water.</u> Would the proposed project result in:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Reduction in the quality of surface water?	_____	_____	<u>X</u>	_____	_____
b. Change in runoff or alteration to drainage patterns?	_____	_____	<u>X</u>	_____	_____
c. Change in water use?	<u>X</u>	_____	_____	_____	_____
d. Change in quality of public water supply or in quality or quantity (dewatering) of ground water?	<u>X</u>	_____	_____	_____	<u>X</u>

Dewatering would be required during construction. The effects of dewatering on surrounding buildings are not known at this time and will be analyzed in the EIR.

11. <u>Energy/Natural Resources.</u> Would the proposed project result in:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Any change in consumption of energy?	<u>X</u>	_____	_____	_____	<u>X</u>
b. Substantial increase in demand on existing energy sources?	_____	<u>X</u>	_____	_____	<u>X</u>
c. An effect on the potential use, extraction, conservation or depletion of a natural resource?	_____	_____	<u>X</u>	_____	<u>X</u>

There would be an increase in energy consumption on the site as a result of the project because of an increase in the total square footage to be served. As a detailed building design has not yet been developed, the extent of energy consumption and the types of conservation measures have not been identified and will be analyzed in the EIR.

The project would conform to energy requirements of Title 24 of the California Administrative Code. There would be an increase in vehicular fuel consumption and an increase in peak-hour electrical demand resulting from elevator use in addition to the peak-hour demand characteristics of other uses in the structure. Other aspects of electrical and natural gas (and/or steam) demand characteristics cannot be determined until more specific building designs are prepared.



No existing active solar energy collection installations would be affected by the project as none are located in the immediate area northerly of the site. No other natural energy resources would be directly affected. The project itself is not expected to have a significant effect on the extraction, conservation, or depletion of a natural resource.

12. <u>Hazards</u> . Would the proposed project result in:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Increased risk of explosion or release of hazardous substances (e.g., oil, pesticides, chemicals or radiation), in the event of an accident, or cause other dangers to public health and safety?	_____	_____	<u>X</u>	_____	_____
b. Creation of or exposure to a potential health hazard?	_____	_____	<u>X</u>	_____	_____
c. Possible interference with an emergency response plan or emergency evacuation plan?	_____	<u>X</u>	_____	_____	<u>X</u>

Construction of the project would result in greater numbers of people on the site, which could increase the difficulty of evacuation during an emergency. The effects of the project on the emergency response plan will be analyzed in the EIR.

13. <u>Cultural</u> . Would the proposed project:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Include or affect a historic site, structure, or building?	<u>X</u>	_____	_____	_____	<u>X</u>
b. Include or affect a known archaeological resource or an area of archaeological resource potential?	_____	<u>X</u>	_____	_____	<u>X</u>
c. Cause a physical change affecting unique ethnic or cultural values?	_____	_____	<u>X</u>	_____	_____

The site contains one "B" rated building, the 64 Jessie Street warehouse building, identified in the Heritage Survey (Splendid Survivors, 1979, Foundation for San Francisco's Architectural Heritage), and one "C" rated building, the 71 Stevenson Street parking garage. The project would result in

the demolition of these two structures. Historic buildings will be analyzed in the EIR.

The site is situated west of the historic shoreline and was originally part of an extensive outcrop of sand dunes. No archaeological resources (shell mounds) of prehistoric age are known to exist on or near the project site; however, the possibility for finds does exist. During the 1850's and 1860's the sand dunes were leveled to accommodate new development. In 1850 a residential community, known as Happy Valley, was established near First and Mission Streets. Cultural materials from these early buildings may be present (unless basement excavations for later buildings obliterated or dispensed such remains)./1/ If any artifacts were to be discovered during site excavation, the project sponsor has agreed to the mitigation measure on page 26 for their protection.

#### NOTES - Cultural

/1/ Olmsted, Roger R., Yerba Buena Center Report on Historical Cultural Resources, San Francisco Redevelopment Agency, August 1979.

#### C. MITIGATION MEASURES

	<u>Yes</u>	<u>No</u>	<u>Disc.</u>
Are mitigation measures included in the project?	<u>X</u>	<u>      </u>	<u>X</u>
Are other mitigation measures available?	<u>X</u>	<u>      </u>	<u>      </u>

Mitigation measures included as part of the project at this time are described below.

#### INCLUDED IN THE PROJECT

#### URBAN DESIGN

- To enhance the pedestrian environment, the project would provide a landscaped plaza and retail arcade that would facilitate pedestrian access through the project site (no pedestrian amenities currently exist on the project site).



- The top of the building would have a step-down configuration in accordance with Guiding Downtown Development; the curved form of the building would permit more sunlight on the Chevron Garden Plaza than would a rectangular building form.

#### TRANSPORTATION/CIRCULATION

- The project sponsor has agreed to contribute funds for maintaining and augmenting transportation service, in an amount proportionate to demand created by the project, as provided by Board of Supervisors Ordinance Number 224-9 or any subsequent equitable funding mechanism developed by the City.
- The project sponsor would encourage transit use by providing for on-site sale of BART tickets and Muni Passes.
- The project sponsor would encourage a tenant carpool/vanpool system by providing a central clearing house for carpool information.
- The project sponsor would provide secure and safe bicycle parking, handicapped parking and handicapped access facilities relative to the demand generated by project users.

#### NOISE

- The project sponsor and project contractor would meet with the Bureau of Engineering to determine necessary and feasible measures to reduce noise during the period that piledriving would occur, including the predrilling of holes for piles to the maximum feasible distance to minimize piledriving activity.
- The project contractor would limit piledriving to the hours resulting in the least disturbance to the greatest number of neighboring uses.

## AIR QUALITY/CLIMATE

- During excavation, unpaved demolition and construction areas would be wetted twice a day to hold down dust; if this were done at least twice a day with complete coverage, particulate emissions (dust) would be reduced about 50 percent.
- The general contractor would use water-based or latex paint on all interior drywalls painted rather than oil-based paints which emit hydrocarbons while drying. This would reduce hydrocarbons from drying paint by about 60 percent.
- The general contractor would maintain and operate construction equipment so as to minimize exhaust emissions.
- During construction, drivers of trucks in loading or unloading queues would turn off their engines to reduce vehicle emissions.

## UTILITIES AND PUBLIC SERVICES

- To reduce the demand on police protection services, the project would incorporate internal security measures which might include such features as a 24-hour staffed guard station in the lobby area, closed circuit television cameras and internal security personnel, and well-lighted entries.
- The project sponsor would provide new project tenants with a fire and earthquake safety orientation program and evacuation plan.

## CULTURAL

- The project sponsor would photographically record, according to National Architectural and Engineering Standards, all buildings on the project site rated by Heritage.



- Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board would be notified. The project sponsor would select an archaeologist to help the Office of Environmental Review to determine the significance of the find and whether feasible measures, including appropriate security measures, could be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.

D. ALTERNATIVES:

	<u>Yes</u>	<u>No</u>	<u>Disc.</u>
Were other alternatives considered?	<u>X</u>	<u>      </u>	<u>X</u>

The following alternatives will be evaluated in the environmental impact report:

1. The No-Project Alternative will assess no change in existing site conditions; the "B" rated warehouse building at 64 Jessie Street and the "C" rated parking garage at 71 Stevenson Street would be retained.
2. The No-Parking Alternative will assess the impact of the proposed project without on-site parking provided; the provision of off-site parking in an appropriate area will be analyzed.
3. The Pre-Interim Controls Alternative will assess an office project with the maximum FAR obtainable using all available floor area bonuses.

4. The Housing Alternative will assess the impacts of providing housing on site through the use of development bonuses recommended in the Department of City Planning Guiding Downtown Development (GDD), May 1981. A balanced mixed-use building would contain housing units equal to the demand that may be created by the project.
5. The Proposed Controls Alternative will assess the impacts of a project which would partially conform to the Department of City Planning's proposals in GDD (shadows would be cast on the Chevron Garden Plaza and possibly the Tishman Building Plaza which would not be responsive to policies of GDD), both with housing and without.
6. The Preservation Alternative will assess the preservation of the "B" rated warehouse building.

E. MANDATORY FINDINGS OF SIGNIFICANCE:

	<u>Yes</u>	<u>No</u>	<u>Disc.</u>
1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal, or eliminate important examples of the major periods of California history or prehistory?	___	<u>X</u>	___
2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	___	<u>X</u>	___
3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.)	<u>X</u>	___	___
4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?	___	<u>X</u>	___
5. Is there a serious public controversy concerning the possible environmental effect of the project?	___	<u>X</u>	___



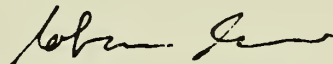
The project would demolish two buildings rated in the Heritage Survey and would contribute to effects from cumulative development on traffic, air quality, noise and energy; these effects will be analyzed in the EIR.

the basis of this initial evaluation:

I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.

I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers\_\_\_\_, in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.



Robert W. Passmore  
Assistant Director-Implementation

for

Dean Macris  
Director

Date: 1/19/82







